WESTON MANAGERS DESIGNERS/CONSULTANTS

ORIGINAL

TRIP REPORT

12th Street Landfill Site
Wilmington, New Castle Co., DE

29 November 1999

Prepared for

U.S. Environmental Protection Agency Region III

Removal Response Section

Philadelphia, PA

SATA
Site Assessment
Technical Assistance

TDD No. 9907-03A
Contract No. 68-S5-3002

TRIP REPORT

ORIGINAL

12th Street Landfill Site
Wilmington, New Castle Co., Delaware

TDD No. 9907-03A
Contract No. 68-S5-3002

1.0 INTRODUCTION

On 8 July 1999, the Roy F. Weston, Inc. (WESTON®), Site Assessment Technical Assistance (SATA) team was directed by U.S. Environmental Protection Agency (EPA) On-Scene Coordinator (OSC) Mike Towle to conduct a removal assessment at the 12th Street Landfill Site (Site) located in Wilmington, New Castle County, Delaware.

2.0 BACKGROUND

2.1 Location

The Site is located in Wilmington, New Castle County, Delaware, as seen in Figure 1, Site Location Map (Reference 1). The approximate site coordinates are 39° 44' 15" north latitude and 75° 31' 35" west longitude (Reference 2).

2.2 Site Description

The 12th Street Landfill Site is located in an industrial area on 12th Street, west of the Interstate-495 12th Street ramp, near Gander Hill Prison in Wilmington, New Castle County, Delaware. The Site consists of two land parcels. Parcel 19 (which contains the area of concern) is bordered to the west by Brandywine Creek, to the north by Asset Recovery Services, and to the east and south by state of Delaware owned land (parcel 14). Parcel 14 is bordered to the north by Gander Hill Prison, to the northeast by a Norfolk & Southern railroad yard, to the east and southeast by Norfolk & Southern railroad tracks (Shellpot Branch), and to the west by the Brandywine Creek and parcel 19 (see Figure 2, Site Plan) (Reference 3).

Julius Wemman previously owned parcel 19 until 1926. Between 1926 and 1930 the parcel was owned by the mayor and council of Wilmington. The Wilmington Economic Development Corporation owned the parcel from 1930 to 1987. This parcel is presently owned by the city of Wilmington. George W. Talley previously owned parcel 14 until 1887. Between 1887 and 1971, the parcel was owned by the Philadelphia, Baltimore, and Washington Rail Road Company. This parcel is presently owned by the state of Delaware Department of Transportation. There is no information on what the parcels were utilized for during previous ownerships. Apparently, the area of concern (AOC) was utilized as an unauthorized dump site, in which at least 14 55-gallon drums, rubber hoses, slag, and a light colored ash-like material were disposed of on the property (Reference 3). The company suspected of dumping, Electric Hose and Rubber, operated out of the Brandywine Industrial Complex located adjacent to the Site and ceased operations in 1977 (Reference 4).

The Site is relatively flat, with an average elevation of approximately 10 feet above sea level. The AOC is bounded to the west by the Brandywine Creek, which flows into the Christina River downstream of the Site. The Brandywine Creek has its headwater in the Piedmont Plateau in Pennsylvania, which defines the border between Chester County and Delaware County in Pennsylvania and

ORIGINAL

WESTON® MANAGERS DESIGNERS/CONSULTANTS FEDERAL PROGRAMS DIVISION	12th Street Landfill Wilmington, New Castle Co., DE	TDD#: 9907-03A PCS#: 5472

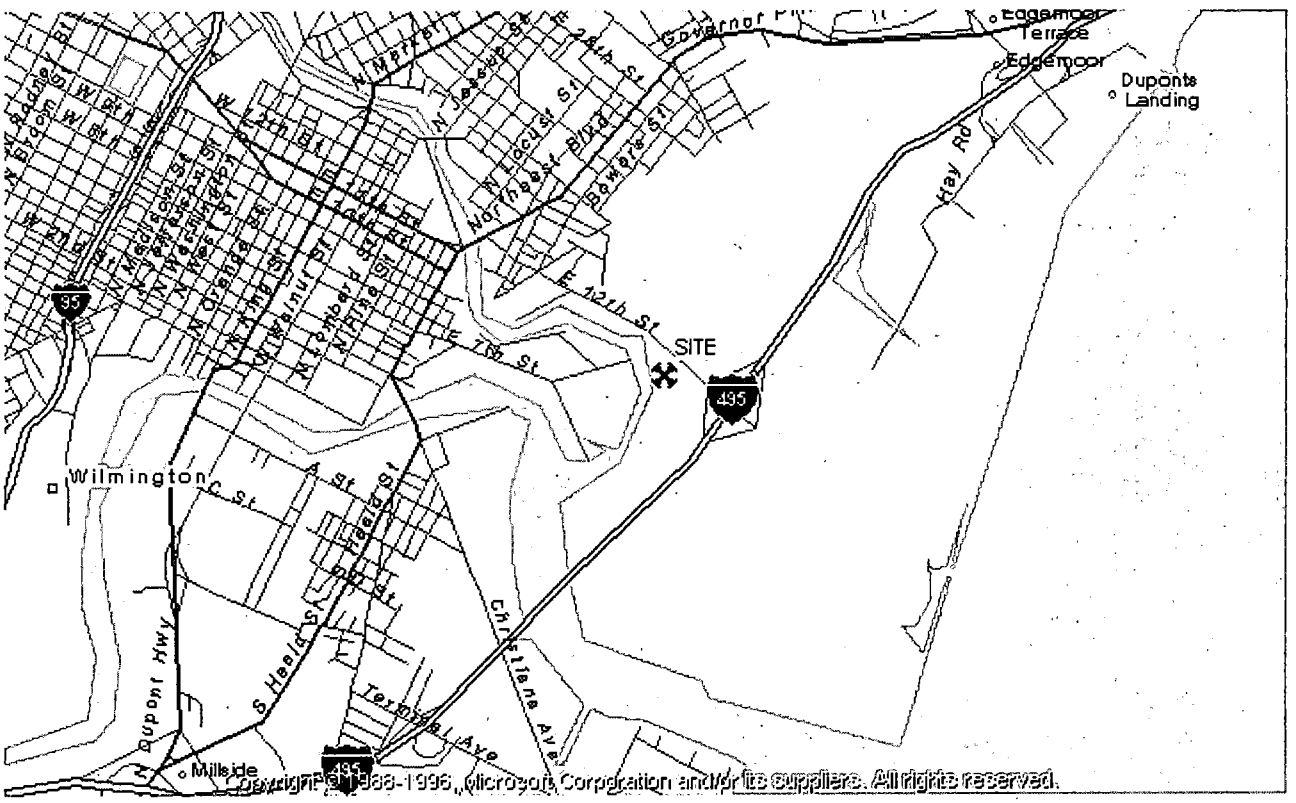


Figure 1
Site Location Map

ORIGINAL

Fig. 2, Site Plan

enters Delaware just north of Beaver Valley. The creek meanders through Wilmington until it joins the Christina River which then joins the Delaware River southeast of Wilmington (Reference 5).

The water supply for the Wilmington area is obtained from a surface water intake located 4,800 feet upstream of the Site along the Brandywine Creek (Reference 6).

During the removal assessment, both parcels were covered with thick vegetation consisting of tall phragmites and deciduous trees. Two drum cluster areas were identified. One drum cluster area is located in the northwestern area of parcel 19 adjacent to the Brandywine Creek (northwest side of the AOC). The second drum cluster area is located in the center of parcel 19 (southern side of the AOC).

2.2 Geologic Setting

The Geology of the Wilmington Area, Delaware Geologic Map Series Number 4 geologic map prepared by the Delaware Geologic Survey indicates that the 12th Street Landfill Site is located on the border of the Piedmont Physiographic Province and the Atlantic Coastal Plain. The contact, referred to as the fall line, is located approximately 2,000 feet north of the 12th Street Landfill Site (Reference 5).

The bedrock at the Site consists of metaigneous and metasedimentary rocks of the Wilmington Complex. The composition is primarily hypersthene-quartz-andesine gneiss with minor amounts of biotite and magnetite. Regolith overlying the bedrock of the area reportedly varies from 0-20 feet (Reference 5).

The unconsolidated aquifer overlying the bedrock generally forms at the base of the regolith, directly above the unweathered bedrock. The aquifer typically acts as an unconfined aquifer. The piedmont aquifers are complex and unpredictable due to the variability of fractures. The rock units of the Piedmont are relatively impermeable, except where weathering or fracturing has taken place (Reference 5).

Due to the variability of the regolith thickness and its limited vertical extent in the vicinity of the site, water yields are expected to be low. Groundwater at the Site is tidal influenced. The tide level for this area fluctuates 6.5 feet between low tide and high tide (Reference 7). During the removal assessment, water levels in the test pits ranged between approximately 7 to 8 feet below ground surface (bgs) in the central and southern sections of the AOC to approximately 13 feet bgs in the northwestern section of the AOC. One test pit (18 feet deep) in the northern section of the AOC did not encounter any groundwater.

There are no public supply or private home wells that are used for either domestic or potable purposes located within four miles of the Site (Reference 6).

2.3 Climatic Setting

The annual average temperature in Wilmington is 54.6°F. The average monthly temperatures range from 35°F in January to 76°F in July. The average annual precipitation for Wilmington is 44.38 inches. The average monthly precipitation

ranges from 2.72 inches in February to 5.34 inches in August. The mean annual lake evaporation for the area of the site is approximately 35 inches. The net annual precipitation for the site is approximately 9.38 inches. A two-year, 24-hour rainfall will produce approximately 3.3 inches of rain (Reference 8).

2.4 Regulatory History

On 14, 15, and 16 June 1999, Delaware Department of Natural Resources and Environmental Control (DNREC) personnel conducted a site visit as part of a Brownfields Site Assessment Investigation for the eastern side of the Brandywine Creek, along 12th Street. During the same time as the site visit, DNREC collected surface soil samples on the Site. On 7 July 1999, DNREC updated city officials on their findings (Reference 4).

In July 1999, the EPA was notified by DNREC to investigate what appeared to be drums containing hazardous materials at the Site.

In late August and early September 1999, OSC Towle began conducting a removal assessment of the property to determine if further federal actions were warranted at the 12th Street Landfill Site.

3.0 SITE ACTIVITIES

Between 26 August and 2 September 1999, a removal assessment was conducted at the 12th Street Landfill Site. Six surface soil samples (including a duplicate) were collected from the AOC, located on parcel 19. Three subsurface soil samples were collected from test pits excavated within the AOC. A groundwater sample was also collected from one test pit (TS-TP-03). Two sediment samples were collected from the eastern edge (mudflat) of the Brandywine Creek adjacent to the Site. Three ash-like samples (including a duplicate) were collected from the eastern bank of the Brandywine Creek, adjacent to the Site. One ash-like sample was collected between 5 to 6 feet bgs from a test pit (TS-TP-01). Four drum content samples were collected from drums observed on site. Sample locations are illustrated on Figure 3, Environmental Sample Location Plan.

Pathways were cut into the Site leading from the dirt access road, located along the Shellpot Branch rail line east of the Site, to the AOC in parcel 19. The pathways were cleared by knocking over the tall phragmites using a front end loader or an excavator. Trees less than 6 inches in diameter were cut down using a chainsaw. The paths were cleared in order for the contractors to gain access to the areas of interest and to set up visual lines for the surveyor to survey the two parcels. Both parcels were surveyed as part of the assessment and the property lines and corners were re-established.

SATA members Paul Davis, Matt Martelli, and Satya Mohanty conducted the field work and sampling. OSCs Mike Towle, Jack Kelly, and Mike Welsh were also on site during different phases of the field activities.

3.1 Site Conditions and Observations

Weather conditions on 26 and 27 August were warm, 86°F, and humid, with cloudy skies (rain occurred during the evening). Weather conditions between 30 August and 2 September were cool, 76°F, low humidity, breezy, with partly cloudy skies.

ORIGINAL

Fig. 3, Sample Location plan

3.2 Test Pit Excavation Activities

Four test pits were excavated within the AOC, located in parcel 19. One test pit, TS-TP-03, was excavated to a depth approximately two feet below the water table, during low tide. Significant yields of groundwater were not encountered in the remaining test pits, due to the silty/clayey soil conditions. The test pits were backfilled to the surface upon completion of each test pit using the excavated material. Test pit 1 had a total depth of 18 feet. Test pit 2 had a total depth of 15 feet. Test pits 3 and 4 had total depths of 9 to 9.5 feet, respectively. A maroon colored silt (possibly fly ash) with rubber hose and wire was found from 0 to 5 feet below ground surface (bgs) in test pit 1, 0 to 8 feet bgs in test pit 2, and 0 to 6 feet bgs in test pits 3 and 4. A white ash-like substance was found from 5 to 6 feet bgs in test pit 1, 8 to 11.5 feet bgs in test pit 2, 3 to 4 feet bgs in test pit 3, and 3 to 5.5 feet bgs in test pit 4. A green and white powdery substance was observed from 9 to 10 feet bgs in test pit 1 and a layer of orange brown cinders/ash was observed from 5.5 to 8 feet bgs in test pit 4. Blackish-gray clayey silt with twig and shell remnants (swamp soils) was underlying the waste/fill material layer in all of the test pits, primarily between 8 and 11.5 feet bgs. Two metal drums containing a brown colored rubber substance and rags with chemical odors was observed in test pit 2.

Eleven exploratory test pits (XTP) were excavated in parcel 19 and three XTPs were excavated in parcel 14. The XTPs were excavated to determine the extent of the fill (maroon colored silt with rubber hoses and metal wire), or if additional buried drums exist in this area. The XTPs were excavated until the natural black organic clay (swamp soil) was encountered. The maroon colored silt fill with rubber hoses and wire was found from 0 to 5 feet bgs in XTPs A, B, and F, from 0 to 4 feet bgs in XTPs C, L, and N, from 0 to 3 feet bgs in XTP-E, from 0 to 2 feet bgs in XTP D, and from 0 to 1 foot bgs in XTP-M. Construction fill consisting of brown silt with rocks was found in XTP-K. Two 55-gallon bung top drums were found during the excavations in XTP-E and XTP-F. The black organic clayey swamp soil was found in XTPs D through J and XTPs L through N ranging at an initial depth of 2 feet bgs to 8 feet bgs. See Attachment 1 for test pit and exploratory test pit logs. See Attachment 4 for the photograph log.

3.3 Sampling Activities

During the removal assessment sampling event on 31 August and 1 September, six surface soil samples (including one duplicate) were collected from the AOC located on parcel 19. TS-SS-01 was collected next to an exposed drum located on the creek bank in the northwest section of the AOC. TS-SS-02 was collected from a location determined by the metal detector and photoionization detector readings, located next to the creek bank in the northwestern section of the AOC. TS-SS-03 was collected from a location determined by the metal detector and photoionization detector redings, located in the center of the AOC. TS-SS-04 was collected from a drainage ditch leading from the drum cluster area, in the southern section of the AOC, to the creek. TS-SS-05 was collected next to an exposed drum located in the southern area of the AOC. Three subsurface soil samples were collected from three test pits. TS-SB-01 was collected from test pit 1,

TS-SB-02 was collected from test pit 2, and TS-SB-03 was collected from test pit 4. The excavator conducting the test pit excavations was utilized to obtain the subsurface soil samples, which were collected directly from the bucket.

Sediment samples were collected from the eastern side (mudflat) of the Brandywine Creek. One sediment sample, TS-SED-01, was collected from the probable point of entry in the southwest section of the AOC (where the drainage ditch discharges into the creek). TS-SED-02 was collected from an area downgradient of the drum cluster area located in the northwest section of the AOC. Both sediment samples were collected during low tide.

One groundwater sample, TS-TP-03-W, was collected from test pit number 3. A peristaltic pump with disposable tubing was utilized to obtain the groundwater sample. The aqueous sample was filtered using a 0.45-micron filter prior to being analyzed by the laboratory. The three other test pits did not yield sufficient amounts of water for chemical analysis, therefore groundwater samples were not collected from these pits.

Laboratory quality assurance and quality control samples were collected. Also, one field blank sample and one rinsate blank sample were collected and analyzed for full scan analyses. See Attachment 2, Sample Log Sheets, for sample descriptions.

All samples were handled and packaged in accordance with the sampling plan. The organic samples were shipped via Federal Express to Severn Trent in Whippany, New Jersey for analysis. The inorganic samples were shipped via Federal Express to Southwest Labs of Oklahoma in Broken Arrow, Oklahoma for analysis. The ash and drum content samples were shipped via Federal Express to Quanterra Inc. located in Pittsburgh, Pennsylvania.

4.0 ANALYTICAL RESULTS

In groundwater sample TS-TP-03-W, the EPA Region III risk-based concentration (RBC) was exceeded for the following metals: arsenic at 5.2 ug/L (RBC = 0.045 ug/L), iron at 20,800 ug/L (RBC = 1,095 ug/L), and manganese at 882 ug/L (RBC = 73 ug/L) (Reference 9). It should be noted that the aquifer the groundwater samples were collected from is not used for drinking. The comparison is used to evaluate the on-site groundwater with regional standards for protection of human health. See Attachment 3, Sample Data Summary, for the analytical results.

Table 1, Industrial Soil RBC Exceedances, summarizes all of the compounds that exceeded industrial soil RBCs and their location (Reference 9).

Table 1
Industrial Soil RBC Exceedances

Chemical	RBC	TS-SS-01	TS-SS-02	TS-SS-03	TS-SS-04	TS-SS-05	TS-FD-01
Arsenic	3.8	33.6 K	48.8 K	117 K	24 K	96.3 K	96.9 K
Iron	61,000	---	---	82,300 J	---	88,800 J	80,900 J
Lead	400	206,000 J	139,000 J	7,460 J	11,100 J	4,590 J	5,630 J
Benzo(a)pyrene	0.78	---	---	---	1	---	---
Chemical	**RBC**	**TS-SB-01**	**TS-SB-02**	**TS-SB-03**			
Arsenic	3.8	16.2 K	29.4 K	27.8 K			
Lead	400	7,670 J	264,000 J	---			
Iron	61,000	---	---	456,000 J			
Thallium	14	---	---	38.7			

All units are in mg/kg. J = Analyte present. Reported value may not be accurate or precise.
--- = Not detected. TS-FD-01 is a field duplicate of sample TS-SS-05.
K = Analyte present. Reported value may be biased high. Actual value is expected to be lower.

Arsenic exceeded its RBC in nine soil samples including one duplicate. There is no RBC for lead in soil. The value of 400 mg/kg was used for comparison purposes and is based on the EPA residential soil screening value. Lead exceeded its screening value in eight soil samples.

The drum content samples and one ash-like material sample (TS-AM-03) were compared to industrial soil RBC values because the sampled material was either found on the ground surface or buried in the ground. Arsenic exceeded its RBC value of 3.8 mg/kg in the following drum content samples: TS-DC-01 (5.1 mg/kg), TS-DC-02 (15.3 mg/kg), TS-DC-04 (19.7 mg/kg), and ash-like material TS-AM-03 (13.1 mg/kg). Lead exceeded its screening value of 400 mg/kg in the following drum content samples: TS-DC-02 (106,000 mg/kg) and TS-DC-04 (3,970 mg/kg) (Reference 9).

Three ash-like material samples (TS-AM-01, TS-AM-02, and its duplicate TS-FD-03) were compared to residential sediment RBC values because the sampled material was found along the creek bank which is used for recreational activities. Arsenic exceeded its RBC value of 4.3 mg/kg in the following ash-like material samples: TS-AM-01 (8.9 mg/kg), TS-AM-02 (26 mg/kg), and TS-FD-03 (26.4 mg/kg). Barium exceeded its RBC value of 5,500 mg/kg in sample TS-AM-02 (6,270 mg/kg) (Reference 9).

In the groundwater sample TS-TP-03-W, the EPA Region III Emergency Removal Guideline (ERG) value (which is derived from the RBCs) was exceeded for the following metals: arsenic at 5.2 ug/L (ERG = 4.5 ug/L), iron at 20,800 ug/L (ERG = 10,950 ug/L), and manganese at 882 ug/L (ERG = 730 ug/L) (Reference 9).

None of the surface soil, subsurface soil, sediment, drum contents, or ash-like material samples exceeded any of the ERG values.

5.0 FUTURE ACTIONS/RECOMMENDATIONS

Following a review of the analytical results and consultation with EPA's ecological risk assessment experts, the OSC will determine if any future EPA actions are necessary at the site.

6.0 REFERENCES

1. Streets 98. Microsoft. 1998.

2. USGS (U. S. Geological Survey). 1987. Wilmington South, DEL-NJ. Topographic Map. DM 5863 II NE-series V821 N4022.5-W7530/7.5.

3. Ticor Title Insurance Company. 1999. Title Search for East 12th Street Landfill Site. Parcel numbers 14, 17, and 19. 10 August.

4. Bresland, A. 1999. Delaware Department of Natural Resources and Environmental Control, Wilmington, Delaware. Telephone conversation with Paul Davis, WESTON SATA. 19 November.

5. WIK Associates Inc. 1996. *Remedial Investigation Report Diamond State Salvage.* Wilmington, DE. August.

6. Roy F. Weston, Inc., Site Assessment Technical Assistance. 1999. *Wilmington Drum ATSDR Package.* Delran, NJ.

7. Roy F. Weston, Inc., Site Assessment Technical Assistance. 1998. *Wilmington Drum Site Sampling Plan – Removal Assessment.* Delran, NJ.

8. NOAA (National Oceanic and Atmospheric Association). 1993. *Climatic Atlas of the United States.* Asheville, NC.

9. U.S. Environmental Protection Agency. 1999. *EPA Region III Risk-Based Concentration Table.* Philadelphia, PA. 7 October.

ATTACHMENTS: 1 – Test Pit Logs and Exploratory Test Pit Logs
2 – Sample Log Sheets
3 – Sample Data Summary
4 – Photograph Log

Attachment 1

Test Pit Logs and Exploratory Test Pit Logs

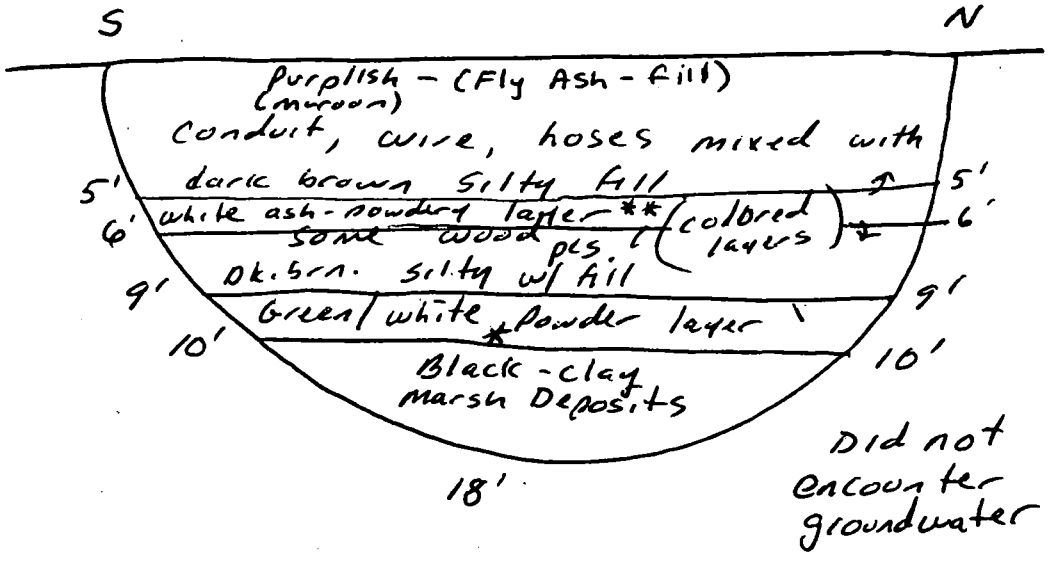
ORIGINAL

TEST PIT LOG — SATA Region III

SITE NAME: 12th Street Landfill SAMPLE No.: TS-TP-01
PCS No.: 5472 DATE: 31 August 1999
WEATHER: Partly sunny, warm, temperatures in the mid 70°s, and windy.
SATA PERSONNEL: (b) (4) [redacted]

DEPTH (FT.) 0	LITH-OLOGY CHANGE	MATERIAL DESCRIPTION Soil color, type, consistency and fill/waste observed.	USCS	REMARKS & (PID)/FID readings
1		Purple-ish (maroonish) - silt (fill)		
2		Fly Ash with conduit, wires,		0.0 ppm
3		rubber hoses - wood pieces.		
4		(colored layers)		
5		(white powdery substance (ash)		
6		↓		
7		Dk. brn silt w/ fill (hose, wire)		
8		↓		
9		Green/white - multicolored layer of		
10		chrystaline powder type material		0.0 ppm
11		Black - clay		
12		marsh deposits		
13		Organics (roots) (bivalve shell		
14		remnants)		
15		↓		
16		(to 18')		

TEST PIT CROSS SECTION



REMARKS: * Collected TS-SB-01 (10' bgs)
** Collected TS-AM-03 (5'-6' bgs)

PHOTO LOG: _____ TEST PIT: TS-TP-01

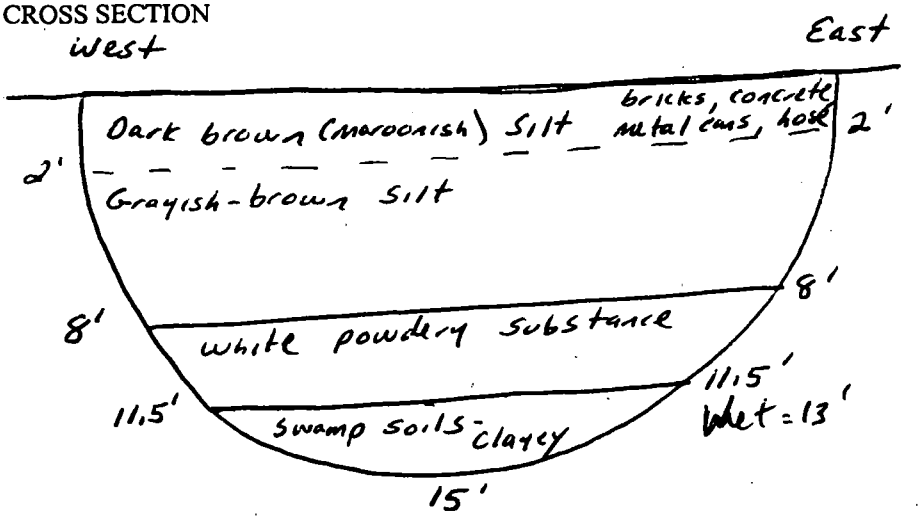
ORIGINAL

TEST PIT LOG — SATA Region III

SITE NAME: 12th Street Landfill — SAMPLE No.: TS-TP-02
PCS No.: 5472 — DATE: 1 September 1999
WEATHER: Partly sunny, warm, temperatures in the mid 70°s, and windy.
SATA PERSONNEL: (b) (4) [redacted]

DEPTH (FT.) 0	LITH-OLOGY CHANGE	MATERIAL DESCRIPTION Soil color, type, consistency and fill/waste observed.	USCS	REMARKS & PID/FID readings
1		Dark brown (maroonish) silt - bricks,		
2		concrete chunks, cans, boulders, hose		0.0 ppm
3		Grayish-brown silt - rubber hose,		
4		wire wrapped hose - bricks, concrete,		
5		rubber hose - Grayish sandy matrl.		
6		rags w/ chemical odors		
7		some ash at 6'6" bgs.		strong sweet Chemical
8		(2) metal drums, rubber (brn. mold of		odors PID=820 ppm
9		rubber), - white powdery substance		PID = 176 ppm
10		brown ash (slag)		
11				
12				
13		Olive-green Clay - Swamp soils		wet @ 13'
14		↓ (Twigs & sweet		
15		remnants)		

TEST PIT CROSS SECTION



REMARKS: collected TS-SB-02 (6.5'-7.0' bgs)

PHOTO LOG: _____ TEST PIT: TS-TP-02

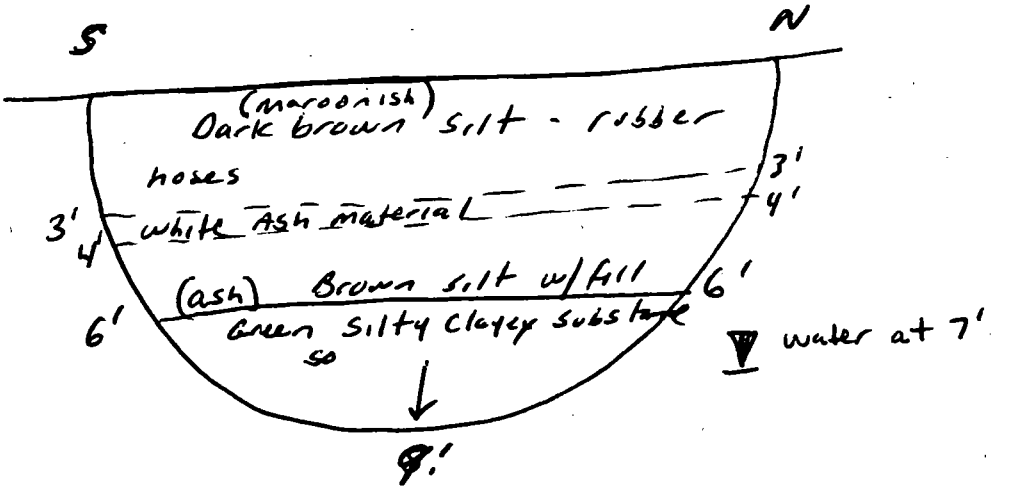
ORIGINAL

TEST PIT LOG — SATA Region III

SITE NAME: 12th Street Landfill — SAMPLE No.: TS-TP-03
PCS No.: 5472 — DATE: 1 September 1999
WEATHER: Partly sunny, warm, temperatures in the mid 70°s, and windy.
SATA PERSONNEL: (b) (4) [redacted]

DEPTH (FT.) 0	LITH-OLOGY CHANGE	MATERIAL DESCRIPTION Soil color, type, consistency and fill/waste observed.	USCS	REMARKS & (PID)/FID readings
1		Dark brown silt with rubber		
2		hoses (maroon) ↓		
3				
4		White Ash-like material layer		0.0 ppm
5		Dark brown silt - (rubber hose)		
6		(some ash @ 6') Brown		
7	▼ 7'	Green Silty Clayey material		
8		some rubber hoses + wires		146 ppm
9		↓		sulfur odors, oily sheen, petroleum odors

TEST PIT CROSS SECTION



REMARKS: Collected groundwater sample: TS-TP-03W

PHOTO LOG: _____ TEST PIT: TS-TP-03

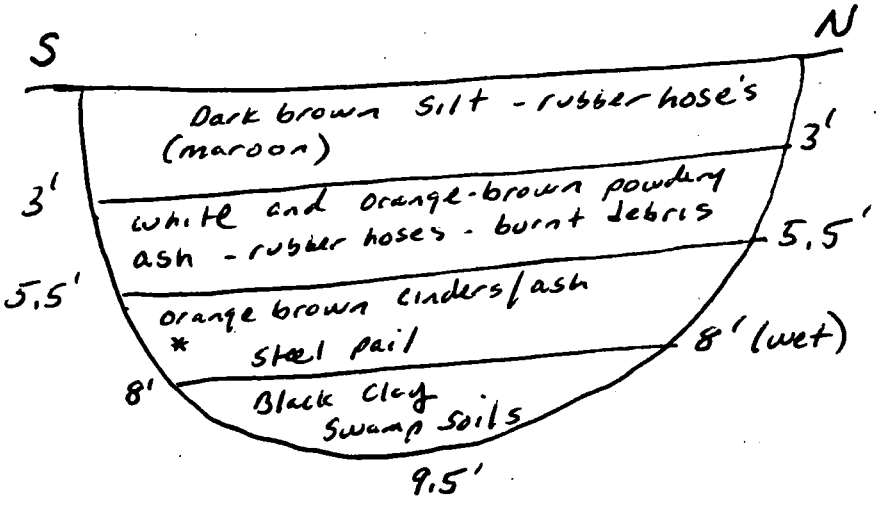
ORIGINAL

TEST PIT LOG — SATA Region III

SITE NAME: 12th Street Landfill — SAMPLE No.: TS-TP-04
PCS No.: 5472 — DATE: 1 September 1999
WEATHER: Partly sunny, warm, temperatures in the mid 70°s, and windy.
SATA PERSONNEL: (b) (4) [redacted]

DEPTH (FT.)	LITH-OLOGY CHANGE	MATERIAL DESCRIPTION Soil color, type, consistency and fill/waste observed.	USCS	REMARKS & PID/FID readings
0				
1		Dark brown silt - rubber hoses		
2		(maroon) ↓		0.0 ppm
3				
4		white & orange brown powdery ash		
5		rubber hoses & burnt debris (cinders)		0.0 ppm
6		↓		
7		orange brown cinders/ash		
8	(wet)	wires and hoses - steel pail		0.0 ppm wet @ 8'
9		Black clay - swamp soils (Twig & shell remnants)		

TEST PIT CROSS SECTION



REMARKS: * Collected TS-SB-03 (7' bgs)

PHOTO LOG: _____ TEST PIT: TS-TP-04

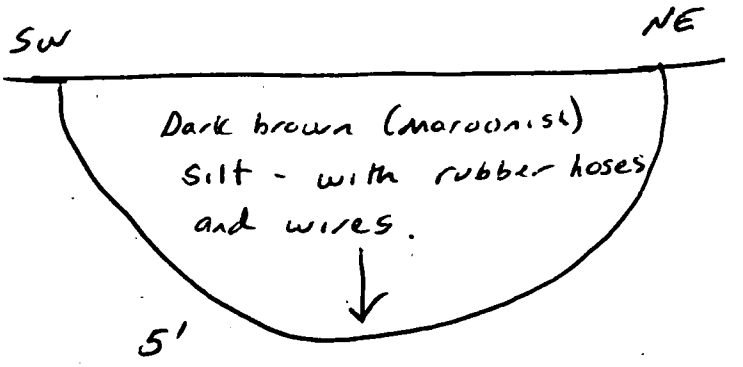
ORIGINAL

EXPLORATORY TEST PIT LOG — SATA Region III

SITE NAME: 12th Street Landfill SAMPLE No.: XTP-A
PCS No.: 5472 DATE: 31 August
WEATHER: Partly sunny, warm, temperatures in the mid 70°s, and windy.
SATA PERSONNEL: (b) (4) [redacted]

DEPTH (FT.) 0	LITH-OLOGY CHANGE	MATERIAL DESCRIPTION Soil color, type, consistency and fill/waste observed.	USCS	REMARKS & PID/FID readings
1		Dark brown (maroonish) silt		
2		Rubber hoses and wires		0.0 ppm
3		(wire mesh) ↓		
4				
5				

TEST PIT CROSS SECTION



REMARKS: 5 feet of fill

PHOTO LOG: _____ TEST PIT: XTP-A

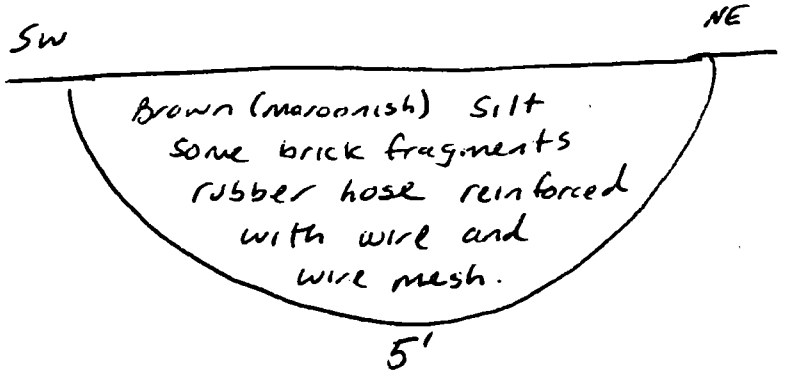
ORIGINAL

EXPLORATORY TEST PIT LOG — SATA Region III

SITE NAME: 12th Street Landfill — SAMPLE No.: XTP-B
PCS No.: 5472 — DATE: 1 September 1999
WEATHER: Partly sunny, warm, temperatures in the mid 70°s, and windy.
SATA PERSONNEL: (b) (4) [redacted]

DEPTH (FT.)	LITH-OLOGY CHANGE	MATERIAL DESCRIPTION Soil color, type, consistency and fill/waste observed.	USCS	REMARKS & (PID)/FID readings
0				
1		Brown (Maroonish) Silt - Some		
2		broken brick fragments. Rubber		
3		hose reinforced with wire and		0.0 ppm
4		wire mesh.		
5		↓		

TEST PIT CROSS SECTION



REMARKS: 5' of fill

PHOTO LOG: _____ TEST PIT: XTP-B

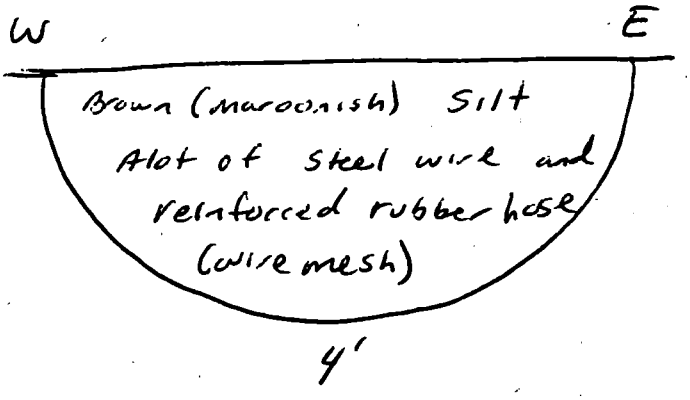
ORIGINAL

EXPLORATORY TEST PIT LOG — SATA Region III

SITE NAME: 12th Street Landfill SAMPLE No.: XTP-C
PCS No.: 5472 DATE: 1 September 1999
WEATHER: Partly sunny, warm, temperatures in the mid 70°s, and windy.
SATA PERSONNEL: (b) (4) [redacted]

DEPTH (FT.) 0	LITH-OLOGY CHANGE	MATERIAL DESCRIPTION Soil color, type, consistency and fill/waste observed.	USCS	REMARKS & PID/FID readings
1		Brown (maroonish) Silt - Alot		
2		of steel wire and reinforced		
3		rubber hose (wire mesh)		0.0 ppm
4		↓		

TEST PIT CROSS SECTION



REMARKS: This was located at a "hot" spot from the metal detector scan. (5-feet of fill)

PHOTO LOG: _____ TEST PIT: XTP-C

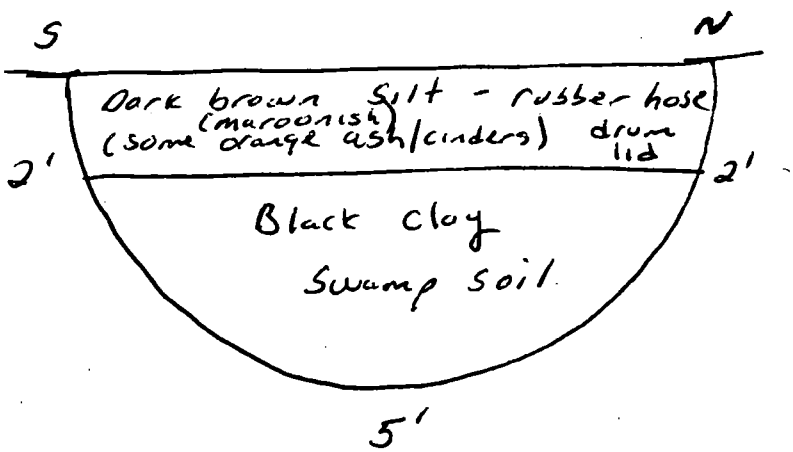
ORIGINAL

EXPLORATORY TEST PIT LOG — SATA Region III

SITE NAME: 12th Street Landfill — SAMPLE No.: XTP-D
PCS No.: 5472 — DATE: 1 September 1999
WEATHER: Partly sunny, warm, temperatures in the mid 70°s, and windy.
SATA PERSONNEL: (b) (4) [redacted]

DEPTH (FT.)	LITH-OLOGY CHANGE	MATERIAL DESCRIPTION Soil color, type, consistency and fill/waste observed.	USCS	REMARKS & PID/FID readings
0		(Mercenary)		
1		Dark brown Silt - rubber hose		
2		(Some orange Cinders) - drum lid		0.0 ppm
3		Black clay - Swamp soil.		
4				
5				

TEST PIT CROSS SECTION



REMARKS: Drum lid exposed (partially buried) - shredded metal sheeting exposed sticking out of ground.

PHOTO LOG: _____ TEST PIT: XTP-D

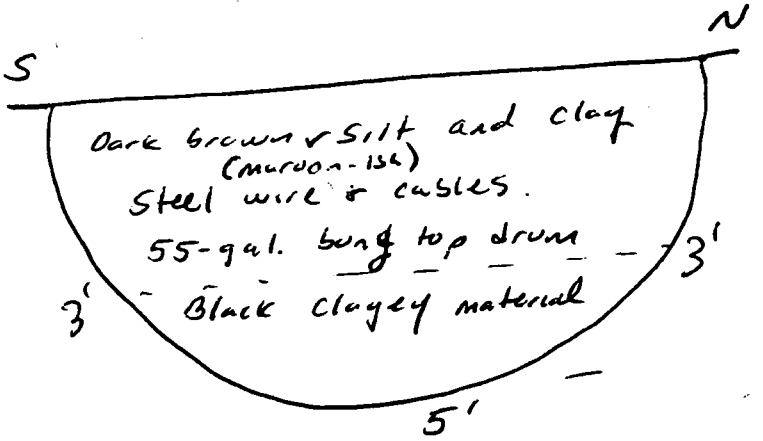
ORIGINAL

EXPLORATORY TEST PIT LOG — SATA Region III

SITE NAME: 12th Street Landfill — SAMPLE No.: XTP-E
PCS No.: 5472 — DATE: 1 September 1999
WEATHER: Partly sunny, warm, temperatures in the mid 70°s, and windy.
SATA PERSONNEL: (b) (4) [redacted]

DEPTH (FT.) 0	LITH-OLOGY CHANGE	MATERIAL DESCRIPTION Soil color, type, consistency and fill/waste observed.	USCS	REMARKS & PID/FID readings
1		Dark brown (maroon-ish) silt and clay		
2		steel wire & cables		Chemical odors
3		55-gal bung top drum		2000 ppm
4		Black clay		
5				water at 5'

TEST PIT CROSS SECTION



REMARKS: Located on ridge/bump near drum cluster area
Collected TS-DC-04 from drum (3' of fill)

PHOTO LOG: _____ TEST PIT: XTP-E

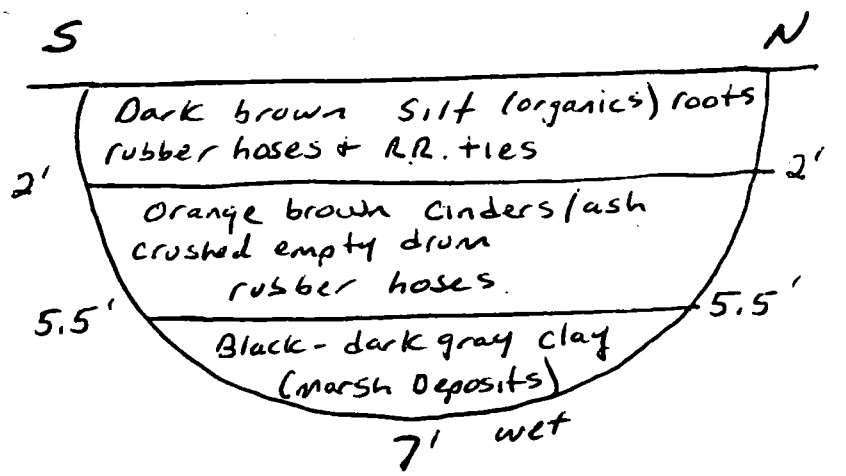
ORIGINAL

EXPLORATORY TEST PIT LOG — SATA Region III

SITE NAME: 12th Street Landfill — SAMPLE No.: XTP-F
PCS No.: 5472 — DATE: 2 September 1999
WEATHER: Partly sunny, warm, temperatures in the mid 70°s, and windy.
SATA PERSONNEL: (b) (4) [redacted]

DEPTH (FT.)	LITH-OLOGY CHANGE	MATERIAL DESCRIPTION Soil color, type, consistency and fill/waste observed.	USCS	REMARKS & PID/FID readings
1		Dk. brown silt (organics/roots)		
2		rubber hoses & R.R. Ties.		0.0 ppm
3		Orange brown cinders/ash		
4		crushed empty drum		7.6 ppm
5		rubber hoses		
6				
7		Black/dark gray clay (roots)		
		Organics - marsh deposits		wet

TEST PIT CROSS SECTION



REMARKS: Located on a ridge/bump/on path leading to drum cluster areas (5.5' of fill)

PHOTO LOG: _____ TEST PIT: XTP-F

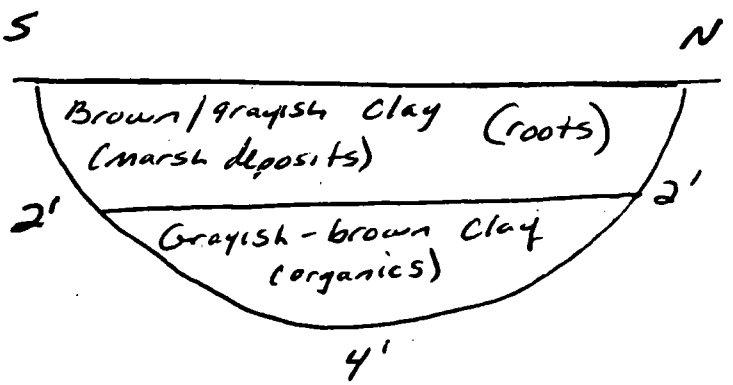
ORIGINAL

EXPLORATORY TEST PIT LOG — SATA Region III

SITE NAME: 12th Street Landfill — SAMPLE No.: XTP-G
PCS No.: 5472 — DATE: 2 September 1999
WEATHER: Partly sunny, warm, temperatures in the mid 70°s, and windy.
SATA PERSONNEL: (b) (4) [redacted]

DEPTH (FT.) 0	LITH-OLOGY CHANGE	MATERIAL DESCRIPTION Soil color, type, consistency and fill/waste observed.	USCS	REMARKS & PID/FID readings
1		Brownish-gray, clay (marsh		
2		organic/roots deposits)		
3		Grayish-brown clay (organics)		
4		(roots) Natural marsh deposits		

TEST PIT CROSS SECTION



REMARKS: No fill encountered.

PHOTO LOG: _____ TEST PIT: XTP-G

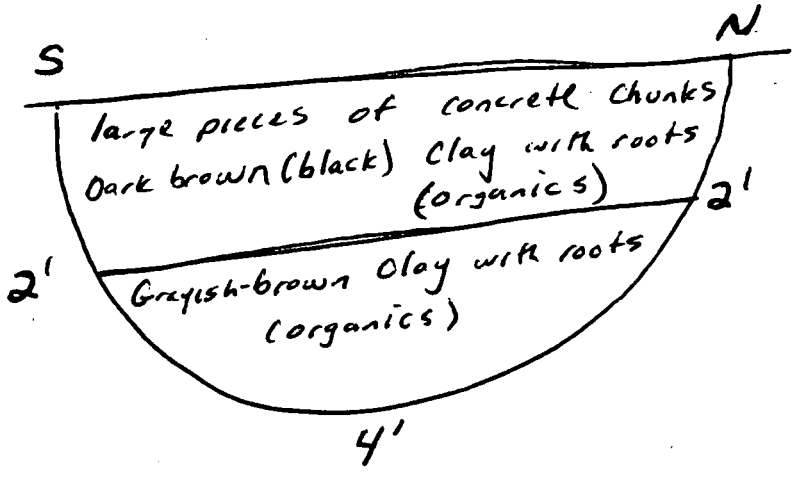
ORIGINAL

EXPLORATORY TEST PIT LOG — SATA Region III

SITE NAME: 12th Street Landfill SAMPLE No.: XTP-H
PCS No.: 5472 DATE: 2 September 1999
WEATHER: Partly sunny, warm, temperatures in the mid 70°s, and windy.
SATA PERSONNEL: (b) (4) [redacted]

DEPTH (FT.) 0	LITH-OLOGY CHANGE	MATERIAL DESCRIPTION Soil color, type, consistency and fill/waste observed.	USCS	REMARKS & PID/FID readings
1		Large concrete chunks, dk. brn./black		
2		clay with roots (organics)		0.0 ppm
3		Grayish-brown clay w/ roots		
4		(organics)		0.0 ppm

TEST PIT CROSS SECTION



REMARKS: No fill encountered

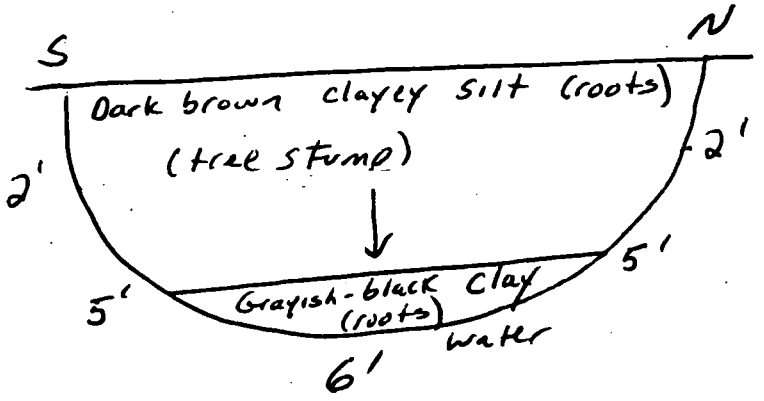
PHOTO LOG: _____ TEST PIT: XTP-H

EXPLORATORY TEST PIT LOG — SATA Region III

SITE NAME: 12th Street Landfill SAMPLE No.: XTP-I
PCS No.: 5472 DATE: 2 September 1999
WEATHER: Partly sunny, warm, temperatures in the mid 70°s, and windy.
SATA PERSONNEL: (b) (4) [redacted]

DEPTH (FT.) 0	LITH-OLOGY CHANGE	MATERIAL DESCRIPTION Soil color, type, consistency and fill/waste observed.	USCS	REMARKS & (PID)/FID readings
1		Dark brown clayey silt. (roots)		
2		tree stump.		
3				0.0 ppm
4				
5				
6		Grayish-black clay (roots)		
		Swamp soil / marsh deposits wet		0.0 ppm

TEST PIT CROSS SECTION



REMARKS: (Possible fill material)

PHOTO LOG: _____ TEST PIT: XTP-I

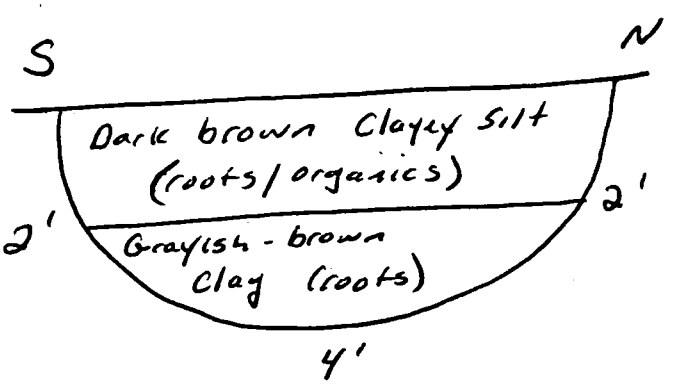
ORIGINAL

EXPLORATORY TEST PIT LOG — SATA Region III

SITE NAME: 12th Street Landfill SAMPLE No.: XTP-J
PCS No.: 5472 DATE: 2 September 1999
WEATHER: Partly sunny, warm, temperatures in the mid 70°s, and windy.
SATA PERSONNEL: (b) (4) [redacted]

DEPTH (FT.) 0	LITH-OLOGY CHANGE	MATERIAL DESCRIPTION Soil color, type, consistency and fill/waste observed.	USCS	REMARKS & PID/FID readings
1		Dark brown Clayey silt		
2		(organics/roots)		0.0 ppm
3		Grayish-brown Clay (roots)		
4				

TEST PIT CROSS SECTION



REMARKS: No fill encountered

PHOTO LOG: _____ TEST PIT: XTP-J

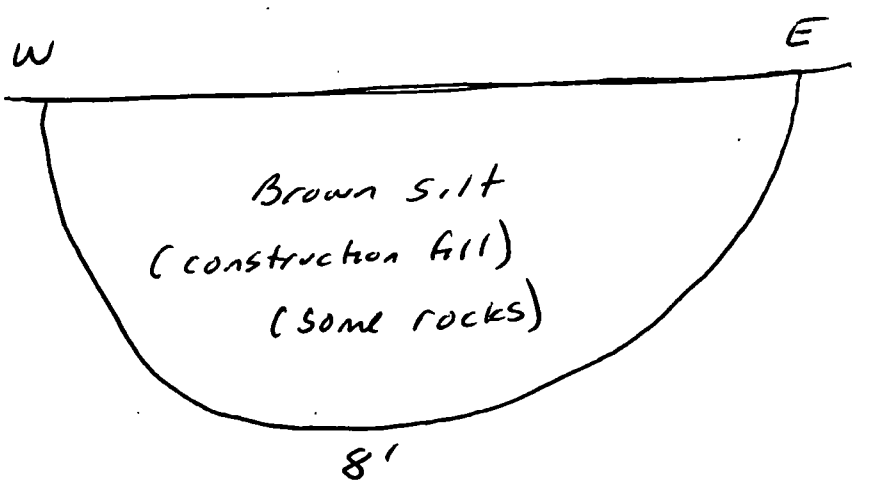
ORIGINAL

EXPLORATORY TEST PIT LOG — SATA Region III

SITE NAME: 12th Street Landfill SAMPLE No.: XTP-K
PCS No.: 5472 DATE: 2 September 1999
WEATHER: Partly sunny, warm, temperatures in the mid 70°s, and windy.
SATA PERSONNEL: (b) (4) [redacted]

DEPTH (FT.) 0	LITH-OLOGY CHANGE	MATERIAL DESCRIPTION Soil color, type, consistency and fill/waste observed.	USCS	REMARKS & (PID)/FID readings
1		Brown Silt (rocks)		
2				0.0 ppm
3				
4				
5				
6		(large rocks)		0.0 ppm
7				
8				

TEST PIT CROSS SECTION



REMARKS: (Possibly construction fill)

PHOTO LOG: _____ TEST PIT: XTP-K

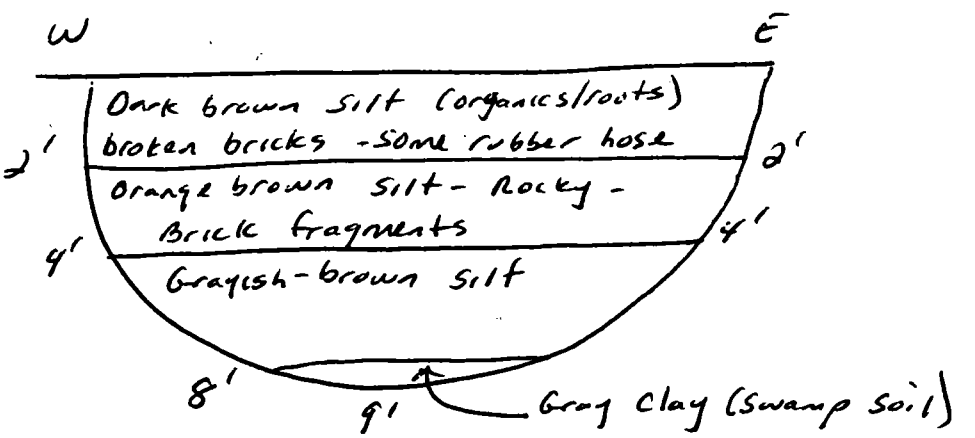
ORIGINAL

EXPLORATORY TEST PIT LOG — SATA Region III

SITE NAME: 12th Street Landfill SAMPLE No.: XTP-L
PCS No.: 5472 DATE: 2 September 1999
WEATHER: Partly sunny, warm, temperatures in the mid 70°s, and windy.
SATA PERSONNEL: (b) (4) [redacted]

DEPTH (FT.) 0	LITH-OLOGY CHANGE	MATERIAL DESCRIPTION Soil color, type, consistency and fill/waste observed.	USCS	REMARKS & (PID) FID readings
1		Dk. brown Silt (organics/roots)		
2		brkn. bricks - some rubber hose		0.0 ppm
3		Orange brown Silt - Rocky -		
4		Brick fragments		
5		Grayish-brown Silt		0.0 ppm
6		↓		
7				
8				
9		Gray Clay (Swamp Soil)		0.0 ppm

TEST PIT CROSS SECTION



REMARKS: 4-feet of fill

PHOTO LOG: _____ TEST PIT: XTP-L

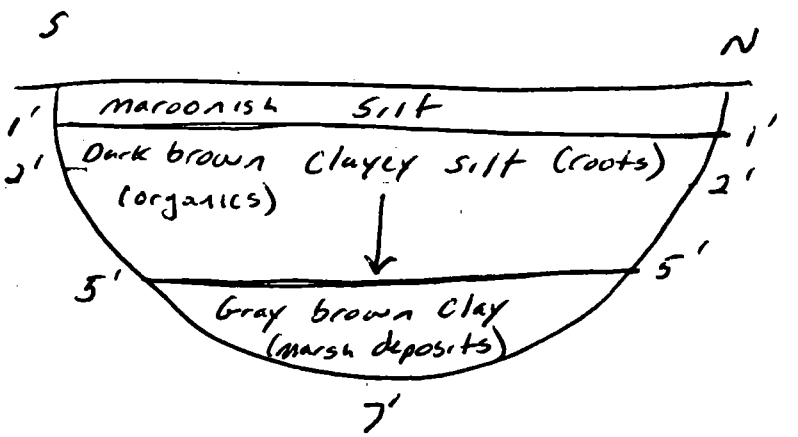
ORIGINAL

EXPLORATORY TEST PIT LOG — SATA Region III

SITE NAME: 12th Street Landfill SAMPLE No.: XTP-M
PCS No.: 5472 DATE: 2 September 1999
WEATHER: Partly sunny, warm, temperatures in the mid 70°s, and windy.
SATA PERSONNEL: (b) (4) [redacted]

DEPTH (FT.) 0	LITH-OLOGY CHANGE	MATERIAL DESCRIPTION Soil color, type, consistency and fill/waste observed.	USCS	REMARKS & (PID)/FID readings
1		Maroon colored silt		
2		Dark brown clayey silt		0.0 ppm
3		(organics + silt)		
4		↓		
5				0.0 ppm
6		Gray-brown clay		
7		marsh deposits		0.0 ppm

TEST PIT CROSS SECTION



REMARKS: 1 foot of fill

PHOTO LOG: _____ TEST PIT: XTP-M

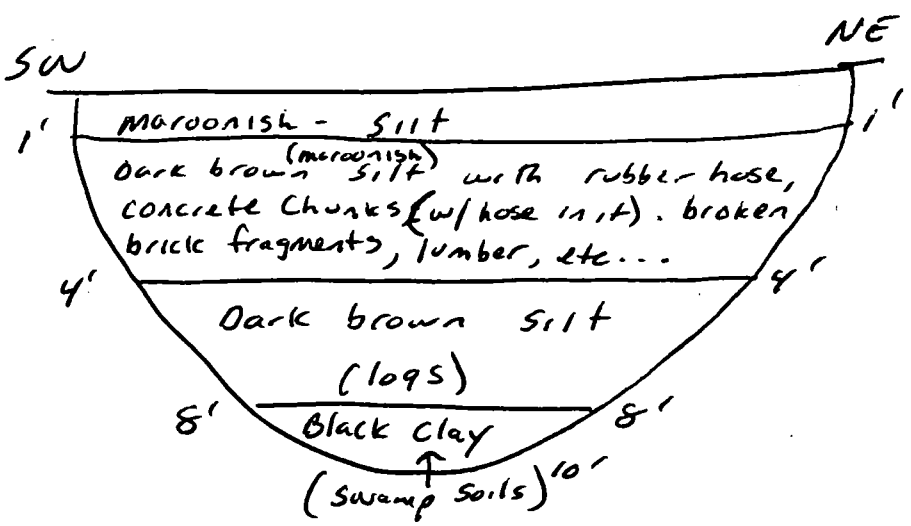
ORIGINAL

EXPLORATORY TEST PIT LOG — SATA Region III

SITE NAME: 12th Street Landfill — SAMPLE No.: XTP-N
PCS No.: 5472 — DATE: 2 September 1999
WEATHER: Partly sunny, warm, temperatures in ~~the~~ mid 70°s, and windy.
SATA PERSONNEL: (b) (4) [redacted]

DEPTH (FT.) o	LITH-OLOGY CHANGE	MATERIAL DESCRIPTION Soil color, type, consistency and fill/waste observed.	USCS	REMARKS & (PID)/FID readings
1		maroon colored Silt		
2		Dk. brown (maroon) Silt with rubber hose		0.0 ppm
3		concrete chunks, broken brick, and		
4		lumber		
5		Dark brown Silt		0.0 ppm
6				
7		(some logs) ↓		
8				
9		Black Clay		0.0 ppm
10		(Swamp Soils)		

TEST PIT CROSS SECTION



REMARKS: At least 4 feet of fill.

PHOTO LOG: _____ TEST PIT: XTP-N

Attachment 2

Sample Log Sheets

ORIGINAL

SOIL/SEDIMENT SAMPLE LOG SHEET — SATA REGION III

SITE NAME: 12th Street Landfill — SAMPLE No.: TS-SED-01
PCS No.: 5472 — DATE: 31 August 1999
WEATHER: Partly sunny, warm, temperatures in the mid 70°s, and windy.
SATA PERSONNEL: (b) (4) [redacted]

☐ Surface Soil ☐ Subsurface Soil ■ Sediment ☐ Waste ☐ Other_____

Sample Method: Disposable Trowel and Aluminum Pan	Color: Brownish-gray
Depth Sampled: 1 to 6 inches below ground surface	Description: Sandy clay with some pebbles and silt.
Sample Date and Time: 8/31/99 at 0815	
Sampled by: (b) (4) [redacted]	
Signature(s): [signature]	

Sample Type

■ Low Concentration
☐ High Concentration
■ Grab
☐ 5-Point Composite

GPS Coordinates:

North: N/A

West: N/A

Analysis	Preservative
■ TCL VOAs	4° C
■ TCL SVOAs	4° C
■ TCL Pesticides/PCBs	4° C
■ TAL Metals	4° C
■ Cyanide	4° C

☐ Duplicate Sample Taken

Observations and Notes:

CLP # CWW62 & MCWY48

collected from eastside mud flat Brandywine Cr.

Sample Location Map:

See Sample Location Map in Trip Report.

collected from drainage pathway leading from drum cluster area. (down gradient of drainage ditch).

ORIGINAL

SOIL/SEDIMENT SAMPLE LOG SHEET — SATA REGION III

SITE NAME: 12th Street Landfill — SAMPLE No.: TS-SED-02
PCS No.: 5472 — DATE: 31 August 1999
WEATHER: Partly sunny, warm, temperatures in the mid 70°s, and windy.
SATA PERSONNEL: (b) (4) [redacted]

☐ Surface Soil ☐ Subsurface Soil ■ Sediment ☐ Waste ☐ Other_____

Sample Method: Disposable Trowel and Aluminum Pan	Color: orange-brown
Depth Sampled: 1 to 6 inches below ground surface	Description: Silty clay - some sand and gravel.
Sample Date and Time: 8/31/99 at 0835	
Sampled by: (b) (4) [redacted]	
Signature(s): Paul D. [illegible]	

Sample Type
- ☑ Low Concentration
- ☐ High Concentration
- ☑ Grab
- ☐ 5-Point Composite

GPS Coordinates:
North: N/A
West: N/A

Analysis	Preservative
☑ TCL VOAs	4° C
☑ TCL SVOAs	4° C
☑ TCL Pesticides/PCBs	4° C
☑ TAL Metals	4° C
☑ Cyanide	4° C

☐ Duplicate Sample Taken

Sample Location Map:

See Sample Location Map in Trip Report.

Observations and Notes:

CLP# - CXJ67 & MCW447

collected from eastern side mud flat on Brandywine Creek.

collected from drainage pathway leading from drum cluster area. And down gradient of exposed ash-like material on creek bank.

ORIGINAL

SOIL/SEDIMENT SAMPLE LOG SHEET — SATA REGION III

SITE NAME: 12th Street Landfill — SAMPLE No.: TS-SS-01
PCS No.: 5472 — DATE: 31 August 1999
WEATHER: Partly sunny, warm, temperatures in the mid 70°s, and windy.
SATA PERSONNEL: (b) (4) [redacted]

■ Surface Soil ☐ Subsurface Soil ☐ Sediment ☐ Waste ☐ Other _____

Sample Method: Disposable Trowel and Aluminum Pan	Color: Grayish-purple (maroon)
Depth Sampled: 1 to 6 inches below ground surface	Description: Fine silt
Sample Date and Time: 8/31/99 at 0855	
Sampled by: (b) (4) [redacted]	
Signature(s): [signature]	

Sample Type

■ Low Concentration
☐ High Concentration
■ Grab
☐ 5-Point Composite

GPS Coordinates:

North: N/A

West: N/A

Analysis	Preservative
■ TCL VOAs	4° C
■ TCL SVOAs	4° C
■ TCL Pesticides/PCBs	4° C
■ TAL Metals	4° C
■ Cyanide	4° C

☐ Duplicate Sample Taken

Sample Location Map:

See Sample Location Map in Trip Report.

Observations and Notes:

CLP # - CXJ68 + MCYB96

collected next to exposed drum on bank of creek.
RAD = 6 mR/Hr PID: 0.0 ppm

ORIGINAL
ORIGINAL

SOIL/SEDIMENT SAMPLE LOG SHEET — SATA REGION III

SITE NAME: 12th Street Landfill — SAMPLE No.: TS-SS-02
PCS No.: 5472 — DATE: 31 August 1999
WEATHER: Partly sunny, warm, temperatures in the mid 70°s, and windy.
SATA PERSONNEL: (b) (4) [redacted]

■ Surface Soil ☐ Subsurface Soil ☐ Sediment ☐ Waste ☐ Other_____

Sample Method: Disposable Trowel and Aluminum Pan	Color: Dark brown (maroon)
Depth Sampled: 1 to 6 inches below ground surface	Description: Silt - some organics
Sample Date and Time: 8/31/99 at 0900	
Sampled by: (b) (4) [redacted]	
Signature(s): [signature]	

Sample Type
- ■ Low Concentration
- ☐ High Concentration
- ■ Grab
- ☐ 5-Point Composite

GPS Coordinates:
North: N/A
West: N/A

Analysis	Preservative
■ TCL VOAs	4° C
■ TCL SVOAs	4° C
■ TCL Pesticides/PCBs	4° C
■ TAL Metals	4° C
■ Cyanide	4° C

☐ Duplicate Sample Taken

Sample Location Map:

See Sample Location Map in Trip Report.

Observations and Notes:

CLP # - CXJ69 + MCYB97
Collected from "Hot Spot" observed during recon. (metal detector/PID reading) - near pathway
PID = 0.0 ppm
RAD = 6 mR/Hr

ORIGINAL

SOIL/SEDIMENT SAMPLE LOG SHEET — SATA REGION III

SITE NAME: 12th Street Landfill — SAMPLE No.: TS-SS-03
PCS No.: 5472 — DATE: 31 August 1999
WEATHER: Partly sunny, warm, temperatures in the mid 70°s, and windy.
SATA PERSONNEL: (b) (4) [redacted]

■ Surface Soil ☐ Subsurface Soil ☐ Sediment ☐ Waste ☐ Other_____

Sample Method: Disposable Trowel and Aluminum Pan	Color: Dark brown (maroon)
Depth Sampled: 1 to 6 inches below ground surface	Description: Silt - some organics
Sample Date and Time: 8/31/99 at 0910	
Sampled by: (b) (4) [redacted]	
Signature(s): [signature]	

Sample Type
■ Low Concentration
☐ High Concentration
■ Grab
☐ 5-Point Composite

GPS Coordinates:
North: N/A
West: N/A

Analysis	Preservative
■ TCL VOAs	4° C
■ TCL SVOAs	4° C
■ TCL Pesticides/PCBs	4° C
■ TAL Metals	4° C
■ Cyanide	4° C

☐ Duplicate Sample Taken

Observations and Notes:
CLP # - CWW84 + MCY398
collected from "Hot Spot" (metal detector) ~60' southeast of drum cluster
PID = 0.0 ppm RAD = 6 mR/hr.

Sample Location Map:
See Sample Location Map in Trip Report.

ORIGINAL

SOIL/SEDIMENT SAMPLE LOG SHEET — SATA REGION III

SITE NAME: 12th Street Landfill — SAMPLE No.: TS-SS-04
PCS No.: 5472 — DATE: 31 August 1999
WEATHER: Partly sunny, warm, temperatures in the mid 70°s, and windy.
SATA PERSONNEL: (b) (4) [redacted]

■ Surface Soil ☐ Subsurface Soil ☐ Sediment ☐ Waste ☐ Other_____

Sample Method: Disposable Trowel and Aluminum Pan	Color: Black
Depth Sampled: 1 to 6 inches below ground surface	Description: Fine silt - some organics
Sample Date and Time: 8/31/99 at 0920	
Sampled by: (b) (4) [redacted]	
Signature(s): Paul M. Dolan	

Sample Type
■ Low Concentration
☐ High Concentration
■ Grab
☐ 5-Point Composite

GPS Coordinates:
North: N/A
West: N/A

Analysis	Preservative
■ TCL VOAs	4° C
■ TCL SVOAs	4° C
■ TCL Pesticides/PCBs	4° C
■ TAL Metals	4° C
■ Cyanide	4° C

☐ Duplicate Sample Taken

Observations and Notes:
CLP # - CWW 85 +
MCYB99
Collected from drainage ditch leading from drum cluster area.
PID = 0.0 ppm

Sample Location Map:
See Sample Location Map in Trip Report.

ORIGINAL

SOIL/SEDIMENT SAMPLE LOG SHEET — SATA REGION III

SITE NAME: 12th Street Landfill — SAMPLE No.: TS-SS-05
PCS No.: 5472 — DATE: 31 August 1999
WEATHER: Partly sunny, warm, temperatures in the mid 70°s, and windy.
SATA PERSONNEL: (b) (4) [redacted]

■ Surface Soil ☐ Subsurface Soil ☐ Sediment ☐ Waste ☐ Other_____

Sample Method: Disposable Trowel and Aluminum Pan	Color: Black (dark brown)
Depth Sampled: 1 to 6 inches below ground surface	Description: Silt - some organics
Sample Date and Time: 8/31/99 at 0930	
Sampled by: (b) (4) [redacted]	
Signature(s): [redacted]	

Sample Type
■ Low Concentration
☐ High Concentration
■ Grab
☐ 5-Point Composite

GPS Coordinates:
North: N/A
West: N/A

Analysis	Preservative
■ TCL VOAs	4° C
■ TCL SVOAs	4° C
■ TCL Pesticides/PCBs	4° C
■ TAL Metals	4° C
■ Cyanide	4° C
■ Duplicate Sample Taken FD-01	

Sample Location Map:

See Sample Location Map in Trip Report.

Observations and Notes:

CLP # - CWW86 + MCYC00

Collected from south side of drum cluster area

PID = 0.0 ppm RAD = 6mR/hr.

ORIGINAL

SOIL/SEDIMENT SAMPLE LOG SHEET — SATA REGION III

SITE NAME: 12th Street Landfill — SAMPLE No.: TS-FD-01
PCS No.: 5472 — DATE: 31 August 1999
WEATHER: Partly sunny, warm, temperatures in the mid 70°s, and windy.
SATA PERSONNEL: (b) (4) [redacted]

■ Surface Soil ☐ Subsurface Soil ☐ Sediment ☐ Waste ☐ Other_____

Sample Method: Disposable Trowel and Aluminum Pan	Color: Black (dark brown)
Depth Sampled: 1 to 6 inches below ground surface	Description: Silt - Some organics
Sample Date and Time: 8/31/99 at 0000	
Sampled by: (b) (4) [redacted]	
Signature(s): Paul D. [illegible]	

Sample Type
■ Low Concentration
☐ High Concentration
■ Grab
☐ 5-Point Composite

GPS Coordinates:
North: N/A
West: N/A

Analysis	Preservative
■ TCL VOAs	4° C
■ TCL SVOAs	4° C
■ TCL Pesticides/PCBs	4° C
■ TAL Metals	4° C
■ Cyanide	4° C
■ Duplicate Sample Taken TS-SS-05	

Sample Location Map:

See Sample Location Map in Trip Report.

Observations and Notes:

CLP # - CWW88 + MCYC02
collected from south side of drum cluster area.

PID: 0.0 ppm RAD: 6mR/Hr

ORIGINAL

SOIL/SEDIMENT SAMPLE LOG SHEET — SATA REGION III

SITE NAME: 12th Street Landfill — SAMPLE No.: TS-SB-01
PCS No.: 5472 — DATE: 31 August 1999
WEATHER: Partly sunny, warm, temperatures in the mid 70°s, and windy.
SATA PERSONNEL: (b) (4) [redacted]

☐ Surface Soil ■ Subsurface Soil ☐ Sediment ☐ Waste ☐ Other_____

Sample Method: Disposable Trowel and Aluminum Pan	Color: multi colored: gold, brown, green, & white
Depth Sampled: 10' below ground surface	Description: Chrystaline powder mixed with dark brown silt (soil).
Sample Date and Time: 8/31/99 at 1340	
Sampled by: (b) (4) [redacted]	
Signature(s): Paul D [illegible]	

Sample Type
- ■ Low Concentration
- ☐ High Concentration
- ■ Grab
- ☐ 5-Point Composite

GPS Coordinates:
North: N/A
West: N/A

Analysis	Preservative
■ TCL VOAs	4° C
■ TCL SVOAs	4° C
■ TCL Pesticides/PCBs	4° C
■ TAL Metals	4° C
■ Cyanide	4° C

☐ Duplicate Sample Taken

Sample Location Map:

See Sample Location Map in Trip Report.

Observations and Notes:

CLP # - CWW91 & MCYC05 collected from Test Pit - 1 #

Collected from backhoe bucket.

PID = 0.0 ppm

ORIGIN

SOIL/SEDIMENT SAMPLE LOG SHEET — SATA REGION III

SITE NAME: 12th Street Landfill — SAMPLE No.: TS-SB-02
PCS No.: 5472 — DATE: 1 September 1999
WEATHER: Partly sunny, warm, temperatures in the mid 70°s, and windy.
SATA PERSONNEL: (b) (4) [redacted]

☐ Surface Soil ■ Subsurface Soil ☐ Sediment ☐ Waste ☐ Other_____

Sample Method: Disposable Trowel and Aluminum Pan	Color: Grayish
Depth Sampled: 6.5' to 7.0' below ground surface	Description: Sandy material (next to metal objects) Also contains rags with solvent type odors.
Sample Date and Time: 9/1/99 at 0850	
Sampled by: (b) (4) [redacted]	
Signature(s): Paul D... [redacted]	

Sample Type
■ Low Concentration
☐ High Concentration
■ Grab
☐ 5-Point Composite

GPS Coordinates:
North: N/A
West: N/A

Analysis	Preservative
■ TCL VOAs	4° C
■ TCL SVOAs	4° C
■ TCL Pesticides/PCBs	4° C
■ TAL Metals	4° C
■ Cyanide	4° C

☐ Duplicate Sample Taken

Observations and Notes:
CLP # - CWW92 & MCYC06 collected from Test Pit #2
collected from backhoe bucket.

Sample Location Map:
See Sample Location Map in Trip Report.

Collected From Test Pit #2

ORIGINAL

SOIL/SEDIMENT SAMPLE LOG SHEET — SATA REGION III

SITE NAME: 12th Street Landfill — SAMPLE No.: TS-SB-03
PCS No.: 5472 — DATE: 1 September 1999
WEATHER: Partly sunny, warm, temperatures in ~~the~~ mid 70°s, and windy.
SATA PERSONNEL: (b) (4) [redacted]

☐ Surface Soil ■ Subsurface Soil ☐ Sediment ☐ Waste ☐ Other_____

Sample Method: Disposable Trowel and Aluminum Pan	Color: Orange
Depth Sampled: 7' below ground surface	Description: Cinders + ash
Sample Date and Time: 9/1/99 at 1340	
Sampled by: (b) (4) [redacted]	
Signature(s): Paul [illegible] MMM	

Sample Type
■ Low Concentration
☐ High Concentration
■ Grab
☐ 5-Point Composite

GPS Coordinates:
North: N/A
West: N/A

Analysis	Preservative
■ TCL VOAs	4° C
■ TCL SVOAs	4° C
■ TCL Pesticides/PCBs	4° C
■ TAL Metals	4° C
■ Cyanide	4° C

☐ Duplicate Sample Taken

Sample Location Map:
See Sample Location Map in Trip Report.

Observations and Notes:
CLP # - CWW93 & MCYC07
collected from Test Pit - #4
collected from backhoe bucket.
PID = 0.0 ppm

ORIGINAL

TEST PIT GROUNDWATER SAMPLE LOG — SATA REGION III

SITE NAME: 12th Street Landfill — SAMPLE No.: TS-TP-03-W
PCS No.: 5472 — DATE: 1 September 1999
WEATHER: Partly sunny, warm, temperatures in ~~the~~ mid 70°s, and windy.
SATA PERSONNEL: (b) (4) [redacted]

Sample Method: Peristaltic Pump with Disposable PE Tubing and 0.45 micron filter.	Color: Clear (after filtering)
Depth Sampled: 7.5 feet below ground surface.	Description: petroleum type odors, oily sheen on surface, sulfur odors.
Sample Date and Time: 9/1/99 at 1120	
Sampled by: (b) (4) [redacted]	
Signature(s): Paul M. Gallagher	

Sample Type

- ■ Low Concentration
- ☐ High Concentration
- ■ Grab

GPS Coordinates:

North: N/A

West: N/A

Analysis	Preservative
■ TCL VOAs	4° C
■ TCL SVOAs	4° C
■ TCL Pesticides/PCBs	4° C
■ TAL Metals	HNO_3 & 4° C
■ Cyanide	NaOH & 4° C
☐ Dioxins/Furans	4° C

☐ Duplicate Sample Taken

Sample Location Map:

See Sample Location Map in Trip Report.

Observations and Notes:

CLP #- CWW97 & MCYC10

collected from Test Pit-#3

ORIGINAL

SOIL/SEDIMENT SAMPLE LOG SHEET — SATA REGION III

SITE NAME: 12th Street Landfill — SAMPLE No.: TS-AM-01
PCS No.: 5472 — DATE: 31 August 1999
WEATHER: Partly sunny, warm, temperatures in the mid 70°s, and windy.
SATA PERSONNEL: (b) (4) [redacted]

☐ Surface Soil ☐ Subsurface Soil ☐ Sediment ☐ Waste ■ Other Ash-like material

Sample Method: Disposable Trowel and Aluminum Pan	Color: white
Depth Sampled: exposed on creek bank 8' below ground surface (top bank)	Description: Ash-like material (fine material/powdery)
Sample Date and Time: 8/31/99 at 0840	
Sampled by: (b) (4) [redacted]	
Signature(s): Paul Lee [illegible]	

Sample Type
☐ Low Concentration
☐ High Concentration
■ Grab
☐ 5-Point Composite

GPS Coordinates:
North: N/A
West: N/A

Analysis	Preservative
■ TCL VOAs	4° C
■ TCL SVOAs	4° C
■ TCL Pesticides/PCBs	4° C
■ TAL Metals	4° C
■ Cyanide	4° C

☐ Duplicate Sample Taken

Sample Location Map:
See Sample Location Map in Trip Report.

Observations and Notes:
Ash-material #1

PID = 0.0 ppm

ORIGINAL

SOIL/SEDIMENT SAMPLE LOG SHEET — SATA REGION III

SITE NAME: 12th Street Landfill — SAMPLE No.: TS-AM-02
PCS No.: 5472 — DATE: 31 August 1999
WEATHER: Partly sunny, warm, temperatures in the mid 70°s, and windy.
SATA PERSONNEL: (b) (4) [redacted]

☐ Surface Soil ☐ Subsurface Soil ☐ Sediment ☐ Waste ☒ Other Ash-like material

Sample Method: Disposable Trowel and Aluminum Pan	Color: White
Depth Sampled: Exposed on creek bank 8' below ground surface (topsoil)	Description: Ash-like material (fine & powdery)
Sample Date and Time: 8/31/99 at 0845	
Sampled by: (b) (4) [redacted]	
Signature(s): Paul D. [illegible]	

Sample Type
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ 5-Point Composite

GPS Coordinates:
North: N/A
West: N/A

Analysis	Preservative
☒ TCL VOAs	4° C
☒ TCL SVOAs	4° C
☒ TCL Pesticides/PCBs	4° C
☒ TAL Metals	4° C
☒ Cyanide	4° C
☒ Duplicate Sample Taken FD-03	

Sample Location Map:

See Sample Location Map in Trip Report.

Observations and Notes:

Ash-material #2

collected from beneath exposed drum cluster area.

PID = 0.0 ppm

ORIGINAL

SOIL/SEDIMENT SAMPLE LOG SHEET — SATA REGION III

SITE NAME: 12th Street Landfill — SAMPLE No.: TS-EB-03
PCS No.: 5472 — DATE: 31 August 1999
WEATHER: Partly sunny, warm, temperatures in the mid 70°s, and windy.
SATA PERSONNEL: (b) (4) [redacted]

☐ Surface Soil ☐ Subsurface Soil ☐ Sediment ☐ Waste ☑ Other Ash-like material

Sample Method: Disposable Trowel and Aluminum Pan	Color: white
Depth Sampled: Exposed on creek bank 8' below ground surface (top of bank)	Description: Ash-like material (fine & powdery)
Sample Date and Time: 8/31/99 at 0000	
Sampled by: (b) (4) [redacted]	
Signature(s): Paul M. Adams Mark Maffei	

Sample Type
- ☐ Low Concentration
- ☐ High Concentration
- ☑ Grab
- ☐ 5-Point Composite

GPS Coordinates:
North: N/A
West: N/A

Analysis	Preservative
☑ TCL VOAs	4° C
☑ TCL SVOAs	4° C
☑ TCL Pesticides/PCBs	4° C
☑ TAL Metals	4° C
☑ Cyanide	4° C
☑ Duplicate Sample Taken TS-AM-02	

Sample Location Map:

See Sample Location Map in Trip Report.

Observations and Notes:

Field Duplicate

ORIGINAL

SOIL/SEDIMENT SAMPLE LOG SHEET — SATA REGION III

SITE NAME: 12th Street Landfill — SAMPLE No.: TS-AM-03
PCS No.: 5472 — DATE: 31 August 1999
WEATHER: Partly sunny, warm, temperatures in the mid 70°s, and windy.
SATA PERSONNEL: (b) (4) [redacted]

☐ Surface Soil ☐ Subsurface Soil ☐ Sediment ☐ Waste ■ Other Ash-like material

Sample Method: (Backhoe bucket) Disposable Trowel and Aluminum Pan	Color: white
Depth Sampled: 5' to 6' ~~1 to 6 inches~~ below ground surface	Description: fine - powdery material Ash-like.
Sample Date and Time: 8/31/99 at 1320	
Sampled by: (b) (4) [redacted]	
Signature(s): Paul M. Dow MD Mella	

Sample Type
☐ Low Concentration
☐ High Concentration
■ Grab
☐ 5-Point Composite

GPS Coordinates:
North: N/A
West: N/A

Analysis	Preservative
■ TCL VOAs	4° C
■ TCL SVOAs	4° C
■ TCL Pesticides/PCBs	4° C
■ TAL Metals	4° C
■ Cyanide	4° C

☐ Duplicate Sample Taken

Sample Location Map:
See Sample Location Map in Trip Report.

Observations and Notes:
Ash-material # 3 collected from Test Pit # 1

PID = 0.0 ppm

ORIGINAL

SOIL/SEDIMENT SAMPLE LOG SHEET — SATA REGION III

SITE NAME: 12th Street Landfill — SAMPLE No.: TS-OC-01
PCS No.: 5472 — DATE: 1 September 1999
WEATHER: Partly sunny, warm, temperatures in the mid 70°s, and windy.
SATA PERSONNEL: (b) (4) [redacted]

☐ Surface Soil ☐ Subsurface Soil ☐ Sediment ☐ Waste ■ Other Drum contents

Sample Method: (Saw was also used) Disposable Trowel and Aluminum Pan	Color: Black outer layer brown inside
Depth Sampled: on Drum exposed ~~below~~ ground surface.	Description: Rubber Substance
Sample Date and Time: 9/1/99 at 0805	
Sampled by: (b) (4) [redacted]	
Signature(s): Paul [redacted]	

Sample Type
- ☐ Low Concentration
- ■ High Concentration
- ■ Grab
- ☐ 5-Point Composite

GPS Coordinates:
North: N/A
West: N/A

Analysis	Preservative
■ TCL VOAs	4° C
■ TCL SVOAs	4° C
■ TCL Pesticides/PCBs	4° C
■ TAL Metals	4° C
■ Cyanide	4° C

☐ Duplicate Sample Taken

Observations and Notes:
Drum contents #01 collected from Drum #1

PID = 0.0 ppm

Sample Location Map:
See Sample Location Map in Trip Report.

ORIGINAL

SOIL/SEDIMENT SAMPLE LOG SHEET — SATA REGION III

SITE NAME: 12th Street Landfill — SAMPLE No.: TS-OC-02
PCS No.: 5472 — DATE: 1 September 1999
WEATHER: Partly sunny, warm, temperatures in the mid 70°s, and windy.
SATA PERSONNEL: (b) (4) [redacted]

☐ Surface Soil ☐ Subsurface Soil ☐ Sediment ☐ Waste ■ Other Drum contents

Sample Method: (Backhoe bucket) Disposable Trowel and Aluminum Pan	Color: Grayish
Depth Sampled: 7' below ground surface	Description: Silt - with rubber pieces & rags w/ solvent odors. (naphthalene odors, also)
Sample Date and Time: 9/1/99 at 1350	
Sampled by: (b) (4) [redacted]	
Signature(s): Paul D. [illegible]	

Sample Type
- ☐ Low Concentration
- ☐ High Concentration
- ■ Grab
- ☐ 5-Point Composite

GPS Coordinates:
North: N/A
West: N/A

Analysis	Preservative
■ TCL VOAs	4° C
■ TCL SVOAs	4° C
■ TCL Pesticides/PCBs	4° C
■ TAL Metals	4° C
■ Cyanide	4° C

☐ Duplicate Sample Taken

Observations and Notes:
Drum contents #2 collected from Test Pit #2

Sample Location Map:
See Sample Location Map in Trip Report.

ORIGINAL

SOIL/SEDIMENT SAMPLE LOG SHEET — SATA REGION III

SITE NAME: 12th Street Landfill SAMPLE No.: TS-DC-03
PCS No.: 5472 DATE: 1 September 1999
WEATHER: Partly sunny, warm, temperatures in the mid 70°s, and windy.
SATA PERSONNEL: (b) (4)

☐ Surface Soil ☐ Subsurface Soil ☐ Sediment ☐ Waste ■ Other Drum contents

Sample Method: Disposable Trowel and Aluminum Pan	Color: - Dark -
Depth Sampled: Exposed drum on ~~below~~ ground surface	Description: Rags, black tarry substance and burnt material.
Sample Date and Time: 9/1/99 at 1400	
Sampled by: (b) (4)	
Signature(s): Paul [illegible]	

Sample Type
☐ Low Concentration
☐ High Concentration
■ Grab
☐ 5-Point Composite

GPS Coordinates:
North: N/A
West: N/A

Analysis	Preservative
■ TCL VOAs	4° C
■ TCL SVOAs	4° C
■ TCL Pesticides/PCBs	4° C
■ TAL Metals	4° C
■ Cyanide	4° C

☐ Duplicate Sample Taken

Sample Location Map:
See Sample Location Map in Trip Report.

Observations and Notes:
Drum contents # 3 collected from Drum #2 located in drainage ditch leading from drum cluster area.

ORIGINAL

SOIL/SEDIMENT SAMPLE LOG SHEET — SATA REGION III

SITE NAME: 12th Street Landfill — SAMPLE No.: TS-DC-04
PCS No.: 5472 — DATE: 1 September 1999
WEATHER: Partly sunny, warm, temperatures in the mid 70°s, and windy.
SATA PERSONNEL: (b) (4) [redacted]

☐ Surface Soil ☐ Subsurface Soil ☐ Sediment ☐ Waste ■ Other Drum Contents

Sample Method: (Backhoe bucket) Disposable Trowel and Aluminum Pan	Color: Dark brown / black
Depth Sampled: 4' below ground surface	Description: Clayey substance with: steel wire / cable, (chemical odors 55-gal bung drum)
Sample Date and Time: 9/1/99 at 1425	
Sampled by: (b) (4) [redacted]	
Signature(s): [redacted]	

Sample Type
- ☐ Low Concentration
- ■ High Concentration
- ■ Grab
- ☐ 5-Point Composite

GPS Coordinates:
North: N/A
West: N/A

Analysis	Preservative
■ TCL VOAs	4° C
■ TCL SVOAs	4° C
■ TCL Pesticides/PCBs	4° C
■ TAL Metals	4° C
■ Cyanide	4° C

☐ Duplicate Sample Taken

Observations and Notes:
Drum contents #4

PID = 2,000 PPM collected from XTP-E (bump in path leading to drum cluster area).

Sample Location Map:

See Sample Location Map in Trip Report.

Attachment 3

Sample Data Summary

ORIGINAL

GLOSSARY OF DATA QUALIFIER CODES (ORGANIC)

CODES RELATED TO IDENTIFICATION

(confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

NO CODE = Confirmed identification.

B = Not detected substantially above the level reported in laboratory or field blanks.

R = Unusable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result.

N = Tentative identification. Consider present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

CODES RELATED TO QUANTITATION

(can be used for both positive results and sample quantitation limits):

J = Analyte present. Reported value may not be accurate or precise.

K = Analyte present. Reported value may be biased high. Actual value is expected to be lower.

L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

UL = Not detected, quantitation limit is probably higher.

OTHER CODES

NJ = Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity.

Q = No analytical result.

ORIGINAL

DATA SUMMARY FORM: VOLATILES

Case #: 27341 SDG : CWW62

Site : 12TH STREET LANDFILL

Lab. : IEANJ

Number of Soil Samples : 11

Number of Water Samples : 0

Sample Number :		CWW62		CWW84		CWW85		CWW86		CWW88	
Sampling Location :		TS-SED-01		TS-SS-03		TS-SS-04		TS-SS-05		TS-FD-01	
Field QC :								Fld. Dup. CWW88		Fld. Dup. CWW86	
Matrix :		Soil		Soil		Soil		Soil		Soil	
Units :		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :		08/31/1999		08/31/1999		08/31/1999		08/31/1999		08/31/1999	
Time Sampled :		08:15		09:10		09:20		09:30		00:00	
%Moisture :		27		21		28		22		22	
pH :											
Dilution Factor :		1.0		1.0		1.0		1.0		1.0	
Volatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
CHLOROMETHANE	10										
BROMOMETHANE	10										
VINYL CHLORIDE	10										
CHLOROETHANE	10										
METHYLENE CHLORIDE	10	5	B	6	B	4	B			4	B
ACETONE	10										
CARBON DISULFIDE	10										
1,1-DICHLOROETHENE	10										
1,1-DICHLOROETHANE	10										
TOTAL 1,2-DICHLOROETHENE	10										
CHLOROFORM	10										
1,2-DICHLOROETHANE	10										
2-BUTANONE	10										
1,1,1-TRICHLOROETHANE	10										
CARBON TETRACHLORIDE	10										
BROMODICHLOROMETHANE	10										
1,2-DICHLOROPROPANE	10										
CIS-1,3-DICHLOROPROPENE	10										
TRICHLOROETHENE	10										
DIBROMOCHLOROMETHANE	10										
1,1,2-TRICHLOROETHANE	10										
BENZENE	10										
TRANS-1,3-DICHLOROPROPENE	10										
BROMOFORM	10										
4-METHYL-2-PENTANONE	10										
2-HEXANONE	10										
TETRACHLOROETHENE	10										
1,1,2,2-TETRACHLOROETHANE	10										
TOLUENE	10										
CHLOROBENZENE	10										
ETHYLBENZENE	10										
STYRENE	10										
XYLENE (TOTAL)	10										

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor/((100 - %Moisture)/100)

Revised 09/99

ORIGINAL

DATA SUMMARY FORM: VOLATILES

Case #: 27341 SDG : CWW62
Site : 12TH STREET LANDFILL
Lab. : IEANJ

Sample Number :		CWW91		CWW92		CWW93		CXJ67		CXJ68	
Sampling Location :		TS-SB-01		TS-SB-02		TS-SB-03		TS-SED-02		TS-SS-01	
Field QC :											
Matrix :		Soil		Soil		Soil		Soil		Soil	
Units :		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :		08/31/1999		09/01/1999		09/01/1999		08/31/1999		08/31/1999	
Time Sampled :		13:40		08:50		13:40		08:35		08:55	
%Moisture :		36		33		2		27		27	
pH :											
Dilution Factor :		1.0		1.0 / 10.0		1.0		1.0		1.0	
Volatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
CHLOROMETHANE	10										
BROMOMETHANE	10										
VINYL CHLORIDE	10										
CHLOROETHANE	10										
METHYLENE CHLORIDE	10	11	B	9	B	3	B	4	B	7	B
ACETONE	10										
CARBON DISULFIDE	10										
1,1-DICHLOROETHENE	10										
1,1-DICHLOROETHANE	10										
TOTAL 1,2-DICHLOROETHENE	10										
CHLOROFORM	10										
1,2-DICHLOROETHANE	10										
2-BUTANONE	10										
1,1,1-TRICHLOROETHANE	10										
CARBON TETRACHLORIDE	10										
BROMODICHLOROMETHANE	10										
1,2-DICHLOROPROPANE	10										
CIS-1,3-DICHLOROPROPENE	10										
TRICHLOROETHENE	10										
DIBROMOCHLOROMETHANE	10										
1,1,2-TRICHLOROETHANE	10										
BENZENE	10										
TRANS-1,3-DICHLOROPROPENE	10										
BROMOFORM	10										
4-METHYL-2-PENTANONE	10										
2-HEXANONE	10										
TETRACHLOROETHENE	10										
1,1,2,2-TETRACHLOROETHANE	10										
TOLUENE	10			1900 +							
CHLOROBENZENE	10										
ETHYLBENZENE	10										
STYRENE	10										
XYLENE (TOTAL)	10										

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor/((100 - %Moisture)/100)

Revised 3/99

+ = Result reported from diluted sample analysis.

Case #: 27341 SDG : CWW62
Site : 12TH STREET LANDFILL
Lab. : IEANJ

Sample Number :		CXJ69									
Sampling Location :		TS-SS-02									
Field QC :											
Matrix :		Soil									
Units :		ug/Kg									
Date Sampled :		08/31/1999									
Time Sampled :		09:00									
%Moisture :		22									
pH :											
Dilution Factor :		1.0									
Volatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
CHLOROMETHANE	10										
BROMOMETHANE	10										
VINYL CHLORIDE	10										
CHLOROETHANE	10										
METHYLENE CHLORIDE	10										
ACETONE	10										
CARBON DISULFIDE	10										
1,1-DICHLOROETHENE	10										
1,1-DICHLOROETHANE	10										
TOTAL 1,2-DICHLOROETHENE	10										
CHLOROFORM	10										
1,2-DICHLOROETHANE	10										
2-BUTANONE	10										
1,1,1-TRICHLOROETHANE	10										
CARBON TETRACHLORIDE	10										
BROMODICHLOROMETHANE	10										
1,2-DICHLOROPROPANE	10										
CIS-1,3-DICHLOROPROPENE	10										
TRICHLOROETHENE	10										
DIBROMOCHLOROMETHANE	10										
1,1,2-TRICHLOROETHANE	10										
BENZENE	10										
TRANS-1,3-DICHLOROPROPENE	10										
BROMOFORM	10										
4-METHYL-2-PENTANONE	10										
2-HEXANONE	10										
TETRACHLOROETHENE	10										
1,1,2,2-TETRACHLOROETHANE	10										
TOLUENE	10										
CHLOROBENZENE	10										
ETHYLBENZENE	10										
STYRENE	10										
XYLENE (TOTAL)	10										

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor/((100 - %Moisture)/100)

DATA SUMMARY FORM: VOLATILES

ORIGINAL

Case #: 27341
Site : 12TH STREET LANDFILL
Lab. : IEANJ

SDG : CWW89

Number of Soil Samples : 0
Number of Water Samples : 4

Sample Number :		CWW89		CWW90		CWW96		CWW97			
Sampling Location :		TS-FB-01		TS-RB-01		TS-TB-01		TS-TP-03W			
Field QC :		Field Blank		Rinsate Blank		Trip Blank					
Matrix :		Water		Water		Water		Water			
Units :		ug/L		ug/L		ug/L		ug/L			
Date Sampled :		08/31/1999		08/31/1999		08/31/1999		09/01/1999			
Time Sampled :		15:30		17:15		08:00		11:20			
%Moisture :		N/A		N/A		N/A		N/A			
pH :											
Dilution Factor :		1.0		1.0		1.0		1.0			
Volatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
CHLOROMETHANE	10										
BROMOMETHANE	10										
*VINYL CHLORIDE	10										
CHLOROETHANE	10										
*METHYLENE CHLORIDE	10										
ACETONE	10*	93		93		90					
CARBON DISULFIDE	10										
*1,1-DICHLOROETHENE	10										
1,1-DICHLOROETHANE	10										
*TOTAL 1,2-DICHLOROETHENE	10										
CHLOROFORM	10										
*1,2-DICHLOROETHANE	10										
*2-BUTANONE	10	110		110		120					
*1,1,1-TRICHLOROETHANE	10										
*CARBON TETRACHLORIDE	10										
BROMODICHLOROMETHANE	10										
*1,2-DICHLOROPROPANE	10										
CIS-1,3-DICHLOROPROPENE	10										
TRICHLOROETHENE	10										
DIBROMOCHLOROMETHANE	10										
1,1,2-TRICHLOROETHANE	10										
*BENZENE	10										
TRANS-1,3-DICHLOROPROPENE	10										
BROMOFORM	10										
4-METHYL-2-PENTANONE	10										
2-HEXANONE	10	14		9	J	14					
*TETRACHLOROETHENE	10										
1,1,2,2-TETRACHLOROETHANE	10										
*TOLUENE	10										
*CHLOROBENZENE	10										
*ETHYLBENZENE	10										
*STYRENE	10										
*XYLENE (TOTAL)	10										

CRQL = Contract Required Quantitation Limit

*Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits multiply the CRQL by the Dilution Factor

Revised 09/99

ORIGINAL

Case #: 27341 SDG : CWW62

Site : 12TH STREET LANDFILL

Lab. : IEANJ

Number of Soil Samples : 11

Number of Water Samples : 0

Sample Number :		CWW82		CWW84		CWW85		CWW86		CWW88	
Sampling Location :		TS-SED-01		TS-SS-03		TS-SS-04		TS-SS-05		TS-FD-01	
Field QC :								Fld. Dup. CWW88		Fld. Dup. CWW86	
Matrix :		Soil		Soil		Soil		Soil		Soil	
Units :		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :		08/31/1999		08/31/1999		08/31/1999		08/31/1999		08/31/1999	
Time Sampled :		08:15		09:10		09:20		09:30		00:00	
%Moisture :		27		21		28		22		22	
pH :		7.3		8.0		7.5		7.6		7.7	
Dilution Factor :		2.0		1.0		1.0		1.0		1.0	
Semivolatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
PHENOL	330	49	B	60	B						
BIS(2-CHLOROETHYL)ETHER	330										
2-CHLOROPHENOL	330										
1,3-DICHLOROBENZENE	330										
1,4-DICHLOROBENZENE	330										
1,2-DICHLOROBENZENE	330										
2-METHYLPHENOL	330										
2,2'-OXYBIS(1-CHLOROPROPANE)	330										
4-METHYLPHENOL	330										
N-NITROSO-DI-N-PROPYLAMINE	330										
HEXACHLOROETHANE	330										
NITROBENZENE	330										
ISOPHORONE	330										
2-NITROPHENOL	330										
2,4-DIMETHYLPHENOL	330										
BIS(2-CHLOROETHOXY)METHANE	330										
2,4-DICHLOROPHENOL	330										
1,2,4-TRICHLOROBENZENE	330										
NAPHTHALENE	330			36	J					120	J
4-CHLOROANILINE	330										
HEXACHLOROBUTADIENE	330										
4-CHLORO-3-METHYLPHENOL	330										
2-METHYLNAPHTHALENE	330			55	J	31	J	46	J	62	J
HEXACHLOROCYCLOPENTADIENE	330										
2,4,6-TRICHLOROPHENOL	330										
2,4,5-TRICHLOROPHENOL	830										
2-CHLORONAPHTHALENE	330										
2-NITROANILINE	830										
DIMETHYLPHTHALATE	330					51	J				
ACENAPHTHYLENE	330			40	J	120	J	47	J	54	J
2,6-DINITROTOLUENE	330										
3-NITROANILINE	830										
ACENAPHTHENE	330							36	J	180	J
2,4-DINITROPHENOL	830										

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor/((100 - %Moisture)/100)

Revised 09/99

ORIGINAL

Case #: 27341 SDG : CWW62

Site : 12TH STREET LANDFILL

Lab. : IEANJ

Sample Number :		CWW62		CWW84		CWW85		CWW86		CWW88	
Sampling Location :		TS-SED-01		TS-SS-03		TS-SS-04		TS-SS-05		TS-FD-01	
Field QC :								Fld. Dup. CWW88		Fld. Dup. CWW86	
Matrix :		Soil		Soil		Soil		Soil		Soil	
Units :		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :		08/31/1999		08/31/1999		08/31/1999		08/31/1999		08/31/1999	
Time Sampled :		08:15		09:10		09:20		09:30		00:00	
%Moisture :		27		21		28		22		22	
pH :		7.3		8.0		7.5		7.6		7.7	
Dilution Factor :		2.0		1.0		1.0		1.0		1.0	
Semivolatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
4-NITROPHENOL	830										
DIBENZOFURAN	330									880	J
2,4-DINITROTOLUENE	330										
DIETHYLPHTHALATE	330										
4-CHLOROPHENYL-PHENYLETHER	330										
FLUORENE	330								J		
4-NITROANILINE	830										
4,6-DINITRO-2-METHYLPHENOL	830										
N-NITROSODIPHENYLAMINE	330										
4-BROMOPHENYL-PHENYLETHER	330										
HEXACHLOROBENZENE	330										
PENTACHLOROPHENOL	830										
PHENANTHRENE	330	81	J	250	J	200	J	470		980	
ANTHRACENE	330	35	J	65	J	140	J	110	J	230	J
CARBAZOLE	330					37	J	35	J	120	J
DI-N-BUTYLPHTHALATE	330	130	J	63	J	78	J	62	J	63	J
FLUORANTHENE	330	200	J	480		840		800		1200	
PYRENE	330	260	J	500		990		920		1400	
BUTYLBENZYLPHTHALATE	330	55	J	71	J	100	J	59	J	76	J
3,3'-DICHLOROBENZIDINE	330										
BENZO(A)ANTHRACENE	330	180	J	360	J	740		510		740	
CHRYSENE	330	160	J	300	J	900		420		630	
BIS(2-ETHYLHEXYL)PHTHALATE	330	1000		900		1400		890		980	
DI-N-OCTYLPHTHALATE	330	66	J	87	J	140	J	74	J	91	J
BENZO(B)FLUORANTHENE	330	200	J	540		2000		660		920	
BENZO(K)FLUORANTHENE	330	100	J	210	J	570		260	J	320	J
BENZO(A)PYRENE	330	170	J	370	J	1000		470		630	
INDENO(1,2,3-CD)PYRENE	330	79	J	250	J	530		270	J	290	J
DIBENZ(A,H)ANTHRACENE	330	29	J	76	J	170	J	80	J	86	J
BENZO(G,H,I)PERYLENE	330	92	J	260	J	530		270	J	320	J

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor/((100 - %Moisture)/100)

Revised 09/99

ORIGINAL

Case #: 27341 SDG : CWW62

Site : 12TH STREET LANDFILL

Lab. : IEANJ

Sample Number :		CWW91		CWW92		CWW93		CXJ67RR		CXJ68DL	
Sampling Location :		TS-SB-01		TS-SB-02		TS-SB-03		TS-SED-02		TS-SS-01	
Field QC :											
Matrix :		Soil		Soil		Soil		Soil		Soil	
Units :		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :		08/31/1999		09/01/1999		09/01/1999		08/31/1999		08/31/1999	
Time Sampled :		13:40		08:50		13:40		08:35		08:55	
%Moisture :		36		33		2		21		12	
pH :		8.1		8.1		6.9		7.5		8.0	
Dilution Factor :		1.0		1.0 / 2.0		1.0		1.0		10.0	
Semivolatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
PHENOL	330	620	B							110	B
BIS(2-CHLOROETHYL)ETHER	330										
2-CHLOROPHENOL	330										
1,3-DICHLOROBENZENE	330										
1,4-DICHLOROBENZENE	330										
1,2-DICHLOROBENZENE	330										
2-METHYLPHENOL	330	46	J								
2,2'-OXYBIS(1-CHLOROPROPANE)	330										
4-METHYLPHENOL	330										
N-NITROSO-DI-N-PROPYLAMINE	330										
HEXACHLOROETHANE	330										
NITROBENZENE	330										
ISOPHORONE	330	57	J	65	J					24	J
2-NITROPHENOL	330										
2,4-DIMETHYLPHENOL	330										
BIS(2-CHLOROETHOXY)METHANE	330										
2,4-DICHLOROPHENOL	330										
1,2,4-TRICHLOROBENZENE	330										
NAPHTHALENE	330	50	J	84	J						
4-CHLOROANILINE	330										
HEXACHLOROBUTADIENE	330										
4-CHLORO-3-METHYLPHENOL	330										
2-METHYLNAPHTHALENE	330	130	J	1300						20	J
HEXACHLOROCYCLOPENTADIENE	330										
2,4,6-TRICHLOROPHENOL	330										
2,4,5-TRICHLOROPHENOL	830										
2-CHLORONAPHTHALENE	330										
2-NITROANILINE	830										
DIMETHYLPHTHALATE	330	54	J								
ACENAPHTHYLENE	330			92	J					45	J
2,6-DINITROTOLUENE	330										
3-NITROANILINE	830										
ACENAPHTHENE	330	69	J	65	J						
2,4-DINITROPHENOL	830										

CRQL = Contract Required Quantitation Limit

To calculate sample quantitation limits: (CRQL * Dilution Factor/((100 - %Moisture)/100)

SEE NARRATIVE FOR CODE DEFINITIONS

Revised 09/99

ORIGINAL

Case #: 27341 SDG : CWW62

Site : 12TH STREET LANDFILL

Lab. : IEANJ

Sample Number :		CWW91		CWW92		CWW93		CXJ67RR		CXJ68DL	
Sampling Location :		TS-SB-01		TS-SB-02		TS-SB-03		TS-SED-02		TS-SS-01	
Field QC :											
Matrix :		Soil		Soil		Soil		Soil		Soil	
Units :		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :		08/31/1999		09/01/1999		09/01/1999		08/31/1999		08/31/1999	
Time Sampled :		13:40		08:50		13:40		08:35		08:55	
%Moisture :		36		33		2		21		12	
pH :		8.1		8.1		6.9		7.5		8.0	
Dilution Factor :		1.0		1.0 / 2.0		1.0		1.0		10.0	
Semivolatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
4-NITROPHENOL	830										
DIBENZOFURAN	330	85	J	60	J						
2,4-DINITROTOLUENE	330										
DIETHYLPHTHALATE	330										
4-CHLOROPHENYL-PHENYLETHER	330										
FLUORENE	330			38	J						
4-NITROANILINE	830										
4,6-DINITRO-2-METHYLPHENOL	830										
N-NITROSODIPHENYLAMINE	330										
4-BROMOPHENYL-PHENYLETHER	330										
HEXACHLOROBENZENE	330										
PENTACHLOROPHENOL	830										
PHENANTHRENE	330	57	J	440	J					220	J
ANTHRACENE	330			100	J					64	J
CARBAZOLE	330			50	J						
DI-N-BUTYLPHTHALATE	330	1100		68	J					42	J
FLUORANTHENE	330	71	J	910						450	J
PYRENE	330	110	J	1000		28	J			490	J
BUTYLBENZYLPHTHALATE	330	190	J	150	J						
3,3'-DICHLOROBENZIDINE	330										
BENZO(A)ANTHRACENE	330	50	J	640						250	J
CHRYSENE	330	62	J	610						360	J
BIS(2-ETHYLHEXYL)PHTHALATE	330	1100		3000 +		1100		28	B	22000	
DI-N-OCTYLPHTHALATE	330	290	J	190	J					88	J
BENZO(B)FLUORANTHENE	330	99	J	940						400	J
BENZO(K)FLUORANTHENE	330	42	J	320	J					210	J
BENZO(A)PYRENE	330	59	J	620						270	J
INDENO(1,2,3-CD)PYRENE	330	44	J	340	J					140	J
DIBENZ(A,H)ANTHRACENE	330			98	J						
BENZO(G,H,I)PERYLENE	330	79	J	310	J	38	J			120	J

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor/((100 - %Moisture)/100)

Revised 09/99

+ = Result reported from diluted sample analysis.

ORIGINAL

Case #: 27341 SDG : CWW62

Site : 12TH STREET LANDFILL

Lab. : IEANJ

Sample Number :		CXJ69									
Sampling Location :		TS-SS-02									
Field QC :											
Matrix :		Soil									
Units :		ug/Kg									
Date Sampled :		08/31/1999									
Time Sampled :		09:00									
%Moisture :		22									
pH :		7.8									
Dilution Factor :		1.0									
Semivolatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
PHENOL	330										
BIS(2-CHLOROETHYL)ETHER	330										
2-CHLOROPHENOL	330										
1,3-DICHLOROBENZENE	330										
1,4-DICHLOROBENZENE	330										
1,2-DICHLOROBENZENE	330										
2-METHYLPHENOL	330										
2,2'-OXYBIS(1-CHLOROPROPANE)	330										
4-METHYLPHENOL	330										
N-NITROSO-DI-N-PROPYLAMINE	330										
HEXACHLOROETHANE	330										
NITROBENZENE	330										
ISOPHORONE	330										
2-NITROPHENOL	330										
2,4-DIMETHYLPHENOL	330										
BIS(2-CHLOROETHOXY)METHANE	330										
2,4-DICHLOROPHENOL	330										
1,2,4-TRICHLOROBENZENE	330										
NAPHTHALENE	330										
4-CHLOROANILINE	330										
HEXACHLOROBUTADIENE	330										
4-CHLORO-3-METHYLPHENOL	330										
2-METHYLNAPHTHALENE	330	32	J								
HEXACHLOROCYCLOPENTADIENE	330										
2,4,6-TRICHLOROPHENOL	330										
2,4,5-TRICHLOROPHENOL	830										
2-CHLORONAPHTHALENE	330										
2-NITROANILINE	830										
DIMETHYLPHTHALATE	330										
ACENAPHTHYLENE	330	41	J								
2,6-DINITROTOLUENE	330										
3-NITROANILINE	830										
ACENAPHTHENE	330										
2,4-DINITROPHENOL	830										

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor/((100 - %Moisture)/100)

Revised 09/99

ORIGINAL

Case #: 27341 SDG : CWW62

Site : 12TH STREET LANDFILL

Lab. : IEANJ

Sample Number :		CXJ69									
Sampling Location :		TS-SS-02									
Field QC :											
Matrix :		Soil									
Units :		ug/Kg									
Date Sampled :		08/31/1999									
Time Sampled :		09:00									
%Moisture :		22									
pH :		7.8									
Dilution Factor :		1.0									
Semivolatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
4-NITROPHENOL	830										
DIBENZOFURAN	330										
2,4-DINITROTOLUENE	330										
DIETHYLPHTHALATE	330										
4-CHLOROPHENYL-PHENYLETHER	330										
FLUORENE	330										
4-NITROANILINE	830										
4,6-DINITRO-2-METHYLPHENOL	830										
N-NITROSODIPHENYLAMINE	330										
4-BROMOPHENYL-PHENYLETHER	330										
HEXACHLOROBENZENE	330										
PENTACHLOROPHENOL	830										
PHENANTHRENE	330	210	J								
ANTHRACENE	330	61	J								
CARBAZOLE	330										
DI-N-BUTYLPHTHALATE	330	49	J								
FLUORANTHENE	330	390	J								
PYRENE	330	490									
BUTYLBENZYLPHTHALATE	330	110	J								
3,3'-DICHLOROBENZIDINE	330										
BENZO(A)ANTHRACENE	330	330	J								
CHRYSENE	330	260	J								
BIS(2-ETHYLHEXYL)PHTHALATE	330	1400									
DI-N-OCTYLPHTHALATE	330	150	J								
BENZO(B)FLUORANTHENE	330	510									
BENZO(K)FLUORANTHENE	330	180	J								
BENZO(A)PYRENE	330	300	J								
INDENO(1,2,3-CD)PYRENE	330	200	J								
DIBENZ(A,H)ANTHRACENE	330	59	J								
BENZO(G,H,I)PERYLENE	330	180	J								

CRQL = Contract Required Quantitation Limit

To calculate sample quantitation limits: (CRQL * Dilution Factor/((100 - %Moisture)/100)

SEE NARRATIVE FOR CODE DEFINITIONS

Revised 09/99

ORIGINAL

Case #: 27341 SDG : CWW89

Site : 12TH STREET LANDFILL

Lab. : IEANJ

Number of Soil Samples : 0

Number of Water Samples : 3

Sample Number :		CWW89		CWW90		CWW97					
Sampling Location :		TS-FB-01		TS-RB-01		TS-TP-03W					
Field QC :		Field Blank		Rinsate Blank							
Matrix :		Water		Water		Water					
Units :		ug/L		ug/L		ug/L					
Date Sampled :		08/31/1999		08/31/1999		09/01/1999					
Time Sampled :		15:30		17:15		11:20					
%Moisture :		N/A		N/A		N/A					
pH :											
Dilution Factor :		1.1		1.2		1.0					
Semivolatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
PHENOL	10	4	J	3	J		UJ				
BIS(2-CHLOROETHYL)ETHER	10						UJ				
2-CHLOROPHENOL	10						UJ				
*1,3-DICHLOROBENZENE	10						UJ				
*1,4-DICHLOROBENZENE	10						UJ				
1,2-DICHLOROBENZENE	10						UJ				
2-METHYLPHENOL	10						UJ				
2,2'-OXYBIS(1-CHLOROPROPANE)	10						UJ				
4-METHYLPHENOL	10						UJ				
N-NITROSO-DI-N-PROPYLAMINE	10						UJ				
HEXACHLOROETHANE	10						UJ				
NITROBENZENE	10						UJ				
ISOPHORONE	10										
2-NITROPHENOL	10										
2,4-DIMETHYLPHENOL	10										
BIS(2-CHLOROETHOXY)METHANE	10										
2,4-DICHLOROPHENOL	10										
1,2,4-TRICHLOROBENZENE	10										
NAPHTHALENE	10										
4-CHLOROANILINE	10										
HEXACHLOROBUTADIENE	10										
4-CHLORO-3-METHYLPHENOL	10										
2-METHYLNAPHTHALENE	10										
HEXACHLOROCYCLOPENTADIENE	10										
2,4,6-TRICHLOROPHENOL	10										
2,4,5-TRICHLOROPHENOL	25										
2-CHLORONAPHTHALENE	10										
2-NITROANILINE	25										
DIMETHYLPHTHALATE	10										
ACENAPHTHYLENE	10										
2,6-DINITROTOLUENE	10										
3-NITROANILINE	25										
ACENAPHTHENE	10										
2,4-DINITROPHENOL	25										

CRQL = Contract Required Quantitation Limit

*Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits multiply the CRQL by the Dilution Factor

Revised 09/99

ORIGINAL

Case #: 27341 SDG : CWW89
Site : 12TH STREET LANDFILL
Lab. : IEANJ

Sample Number :		CWW89		CWW90		CWW97					
Sampling Location :		TS-FB-01		TS-RB-01		TS-TP-03W					
Field QC :		Field Blank		Rinsate Blank							
Matrix :		Water		Water		Water					
Units :		ug/L		ug/L		ug/L					
Date Sampled :		08/31/1999		08/31/1999		09/01/1999					
Time Sampled :		15:30		17:15		11:20					
%Moisture :		N/A		N/A		N/A					
pH :											
Dilution Factor :		1.1		1.2		1.0					
Semivolatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
4-NITROPHENOL	25										
DIBENZOFURAN	10										
2,4-DINITROTOLUENE	10										
DIETHYLPHTHALATE	10										
4-CHLOROPHENYL-PHENYLETHER	10										
FLUORENE	10										
4-NITROANILINE	25										
4,6-DINITRO-2-METHYLPHENOL	25										
N-NITROSODIPHENYLAMINE	10										
4-BROMOPHENYL-PHENYLETHER	10										
*HEXACHLOROBENZENE	10										
*PENTACHLOROPHENOL	25										
PHENANTHRENE	10										
ANTHRACENE	10										
CARBAZOLE	10										
DI-N-BUTYLPHTHALATE	10										
FLUORANTHENE	10										
PYRENE	10										
BUTYLBENZYLPHTHALATE	10										
3,3'-DICHLOROBENZIDINE	10										
BENZO(A)ANTHRACENE	10										
CHRYSENE	10										
BIS(2-ETHYLHEXYL)PHTHALATE	10										
DI-N-OCTYLPHTHALATE	10										
BENZO(B)FLUORANTHENE	10										
BENZO(K)FLUORANTHENE	10										
BENZO(A)PYRENE	10										
INDENO(1,2,3-CD)PYRENE	10										
DIBENZ(A,H)ANTHRACENE	10										
BENZO(G,H,I)PERYLENE	10										

CRQL = Contract Required Quantitation Limit *Action Level Exists SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits multiply the CRQL by the Dilution Factor

ORIGINAL

Case #: 27341 SDG : CWW62

Site : 12TH STREET LANDFILL

Lab. : IEANJ

Number of Soil Samples : 11

Number of Water Samples : 0

Sample Number :		CWW62		CWW84		CWW85		CWW86		CWW88	
Sampling Location :		TS-SED-01		TS-SS-03		TS-SS-04		TS-SS-05		TS-FD-01	
Field QC :								Fld. Dup. CWW88		Fld. Dup. CWW86	
Matrix :		Soil		Soil		Soil		Soil		Soil	
Units :		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :		08/31/1999		08/31/1999		08/31/1999		08/31/1999		08/31/1999	
Time Sampled :		08:15		09:10		09:20		09:30		00:00	
%Moisture :		27		21		28		22		22	
pH :		7.3		8.0		7.5		7.6		7.7	
Dilution Factor :		0.99		1.0		1.0		1.0		1.0	
Pesticide/PCB Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALPHA-BHC	1.7										
BETA-BHC	1.7										
DELTA-BHC	1.7										
GAMMA-BHC (LINDANE)	1.7										
HEPTACHLOR	1.7										
ALDRIN	1.7										
HEPTACHLOR EPOXIDE	1.7	0.64	J								
ENDOSULFAN I	1.7			1.7	J	0.84	J	0.36	J	0.58	J
DIELDRIN	3.3			4.9	J	9.4	J				
4,4'-DDE	3.3	2.0	J	2.0	J	7.2	J	1.1	J	2.0	J
ENDRIN	3.3	3.2	J	2.6	J	4.2	J	4.1	J	2.7	J
ENDOSULFAN II	3.3	5.9	J	1.9	J	6.2	J	4.3	J	2.0	J
4,4'-DDD	3.3	11		4.5		9.6		9.1	J	6.5	J
ENDOSULFAN SULFATE	3.3	1.8	J								
4,4'-DDT	3.3	1.6	J	4.3	J	6.6	J	3.7	J	3.5	J
METHOXYCHLOR	17			4.1	J	33		10	J	6.4	J
ENDRIN KETONE	3.3										
ENDRIN ALDEHYDE	3.3	12	J	4.1	J	7.4	J	2.0	J	2.2	J
ALPHA-CHLORDANE	1.7	2.6	J					1.4	J		
GAMMA-CHLORDANE	1.7	1.9	J								
TOXAPHENE	170										
AROCLOR-1016	33										
AROCLOR-1221	67										
AROCLOR-1232	33										
AROCLOR-1242	33										
AROCLOR-1248	33										
AROCLOR-1254	33										
AROCLOR-1260	33	170	J	68	J	100	J	65		68	J

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor/((100 - %Moisture)/100)

ORIGINAL

Case #: 27341 SDG : CWW62

Site : 12TH STREET LANDFILL

Lab. : IEANJ

Sample Number :		CWW91		CWW92		CWW93		CXJ67		CXJ68	
Sampling Location :		TS-SB-01		TS-SB-02		TS-SB-03		TS-SED-02		TS-SS-01	
Field QC :											
Matrix :		Soil		Soil		Soil		Soil		Soil	
Units :		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :		08/31/1999		09/01/1999		09/01/1999		08/31/1999		08/31/1999	
Time Sampled :		13:40		08:50		13:40		08:35		08:55	
%Moisture :		36		33		2		21		12	
pH :		8.1		8.1		6.9		7.5		8.0	
Dilution Factor :		1.0		1.0		1.0		0.99		1.0	
Pesticide/PCB Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALPHA-BHC	1.7							0.13	J		
BETA-BHC	1.7										
DELTA-BHC	1.7										
GAMMA-BHC (LINDANE)	1.7										
HEPTACHLOR	1.7										
ALDRIN	1.7										
HEPTACHLOR EPOXIDE	1.7	0.83	J			0.55	J				
ENDOSULFAN I	1.7	0.39	J			0.28	J			0.8	J
DIELDRIN	3.3	1.4	J	2.1	J	0.35	J				
4,4'-DDE	3.3	2.0	J	11	J	1.5	J			22	J
ENDRIN	3.3	3.4	J	12	J	2.1	J			3.6	J
ENDOSULFAN II	3.3	2.8	J	5.3	J						
4,4'-DDD	3.3	4.4	J	10	J	12	J	0.81	J	13	
ENDOSULFAN SULFATE	3.3										
4,4'-DDT	3.3	1.8	J	9.8	J			0.66	J	8.4	J
METHOXYCHLOR	17	5.2	J	16	J					87	J
ENDRIN KETONE	3.3										
ENDRIN ALDEHYDE	3.3			5.4	J	1.0	J			13	J
ALPHA-CHLORDANE	1.7	0.94	J			1.7		0.15	J		
GAMMA-CHLORDANE	1.7					0.24	J			5.4	J
TOXAPHENE	170										
AROCLOR-1016	33										
AROCLOR-1221	67										
AROCLOR-1232	33										
AROCLOR-1242	33										
AROCLOR-1248	33										
AROCLOR-1254	33	37	J	150	J	27	J			130	J
AROCLOR-1260	33			71						200	

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor/((100 - %Moisture)/100)

Revised 09/99

ORIGINAL

Case #: 27341 SDG : CWW62
Site : 12TH STREET LANDFILL
Lab. : IEANJ

Sample Number :		CXJ69									
Sampling Location :		TS-SS-02									
Field QC :											
Matrix :		Soil									
Units :		ug/Kg									
Date Sampled :		08/31/1999									
Time Sampled :		09:00									
%Moisture :		22									
pH :		7.8									
Dilution Factor :		1.0									
Pesticide/PCB Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALPHA-BHC	1.7										
BETA-BHC	1.7										
DELTA-BHC	1.7										
GAMMA-BHC (LINDANE)	1.7										
HEPTACHLOR	1.7										
ALDRIN	1.7	0.38	J								
HEPTACHLOR EPOXIDE	1.7										
ENDOSULFAN I	1.7										
DIELDRIN	3.3	4.5									
4,4'-DDE	3.3	1.0	J								
ENDRIN	3.3										
ENDOSULFAN II	3.3	1.0	J								
4,4'-DDD	3.3										
ENDOSULFAN SULFATE	3.3										
4,4'-DDT	3.3	2.9	J								
METHOXYCHLOR	17	9.0	J								
ENDRIN KETONE	3.3										
ENDRIN ALDEHYDE	3.3	2.3	J								
ALPHA-CHLORDANE	1.7										
GAMMA-CHLORDANE	1.7										
TOXAPHENE	170										
AROCLOR-1016	33										
AROCLOR-1221	67										
AROCLOR-1232	33										
AROCLOR-1242	33										
AROCLOR-1248	33										
AROCLOR-1254	33										
AROCLOR-1260	33	46									

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor/((100 - %Moisture)/100)

Revised 09/99

ORIGINAL

DATA SUMMARY FORM: PESTICIDES AND PCBS

Case #: 27341 SDG : CWW89

Site : 12TH STREET LANDFILL

Lab. : IEANJ

Number of Soil Samples : 0

Number of Water Samples : 3

Sample Number :		CWW89		CWW90		CWW97					
Sampling Location :		TS-FB-01		TS-RB-01		TS-TP-03W					
Field QC :		Field Blank		Rinsate Blank							
Matrix :		Water		Water		Water					
Units :		ug/L		ug/L		ug/L					
Date Sampled :		08/31/1999		08/31/1999		09/01/1999					
Time Sampled :		15:30		17:15		11:20					
%Moisture :		0		0		0					
pH :											
Dilution Factor :		1.1		1.1		1.0					
Pesticide/PCB Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALPHA-BHC	0.050										
BETA-BHC	0.050										
DELTA-BHC	0.050										
*GAMMA-BHC (LINDANE)	0.050										
*HEPTACHLOR	0.050										
ALDRIN	0.050										
HEPTACHLOR EPOXIDE	0.050										
ENDOSULFAN I	0.050										
DIELDRIN	0.10										
4,4'-DDE	0.10										
*ENDRIN	0.10										
ENDOSULFAN II	0.10										
4,4'-DDD	0.10										
ENDOSULFAN SULFATE	0.10										
4,4'-DDT	0.10										
*METHOXYCHLOR	0.50										
ENDRIN KETONE	0.10										
ENDRIN ALDEHYDE	0.10										
ALPHA-CHLORDANE	0.050										
GAMMA-CHLORDANE	0.050										
*TOXAPHENE	5.0										
*AROCLOR-1016	1.0										
*AROCLOR-1221	2.0										
*AROCLOR-1232	1.0										
*AROCLOR-1242	1.0										
*AROCLOR-1248	1.0										
*AROCLOR-1254	1.0										
*AROCLOR-1260	1.0										

CRQL = Contract Required Quantitation Limit *Action Level Exists SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits multiply the CRQL by the Dilution Factor

GLOSSARY OF DATA QUALIFIER CODES

CODES RELATED TO IDENTIFICATION
(confidence concerning presence or absence of analytes):

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

(NO CODE) = Confirmed identification.

B = Not detected substantially above the level reported in laboratory or field blanks.

R = Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result.

CODES RELATED TO QUANTITATION
(can be used for both positive results and sample quantitation limits):

J = Analyte Present. Reported value may not be accurate or precise.

K = Analyte present. Reported value may be biased high. Actual value is expected to be lower.

L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.

[] = Analyte present. As values approach the IDL the quantitation may not be accurate.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

UL = Not detected, quantitation limit is probably higher.

OTHER CODES

Q = No analytical result.

DATA SUMMARY FORM: I N O R G A N I C S

Site Name: 12TH STREET LANDFILL

WATER SAMPLES
(ug/L)

Case #: 27341 Sampling Date(s): 08/31/1999 - 09/01/1999

SDG #: MCWY47

+ Due to dilution, sample quantitation limit is affected. See dilution table for specifics.

	Sample No.		MCYC03		MCYC04		MCYC10													
	Dilution Factor		1.00		1.00		1.00 / 25.00													
	Location		TS-FB-01		TS-RB-01		TS-TP-03W													
			SAMPLE IS A FIELD BLANK		SAMPLE IS A RINSATE BLANK															
CRDL	ANALYTE																			
200	Aluminum			UL		UL		UL												
60	Antimony		[3.2]	B			[4.1]	B												
10	*Arsenic						[5.2]													
200	Barium						[144]													
5	Beryllium																			
5	*Cadmium																			
5000	Calcium			UL		UL	319000													
10	*Chromium																			
50	Cobalt						[2.5]													
25	Copper																			
100	Iron						20800													
3	*Lead		40.4	L	10.4	L	5.3	B												
5000	Magnesium			UL		UL	74300													
15	Manganese						882													
0.2	Mercury					UL	[0.11]													
40	*Nickel						[18.3]													
5000	Potassium		[42.5]				22100													
5	Selenium						14.3													
10	Silver																			
5000	Sodium		[2880]	J	[2850]	J	679000 +	J												
10	Thallium			UL		UL		UL												
50	Vanadium																			
20	Zinc		[6.0]	B	[4.4]	B	75.5	J												
10	*Cyanide			UL		UL		UL												

CRDL = Contract Required Detection Limit

*Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS

revised 02/98

ORIGINAL

Site Name: 12TH STREET LANDFILL

SOIL SAMPLES
(mg/Kg)

Case #: 27341 Sampling Date(s): 08/31/1999 - 09/01/99
SDG #: MCWY47

+ Due to dilution, sample quantitation limit is affected.
See dilution table for specifics.

CRDL	ANALYTE	Sample No.	MCWY47		MCWY48		MCYB96		MCYB97		MCYB98		MCYB99		MCYC00		MCYC02		MCYC05		MCYC06	
		Dilution Factor	1.00		1.00		1.00 / 50.00		1.00 / 20.00		1.00 / 5.00		1.00		1.00 / 5.00		1.00 / 5.00		1.00 / 5.00		1.00/5.00/100	
		% Solids	78.2		73.5		86.3		81.0		78.6		72.9		80.5		78.9		61.9		88.0	
		Location	TS-SED-02		TS-SED-01		TS-SS-01		TS-SS-02		TS-SS-03		TS-SS-04		TS-SS-05		TS-FD-01		TS-SB-01		TS-SB-02	
															DUPLICATE OF MCYC02		DUPLICATE OF MCYC00					
40	Aluminum		16100		13300		23700		13400		13300		14700		16300		15100		45100		25200	
12	Antimony		[0.86]	B	[6.6]	L	[1.2]	B	[2.4]	B	[4.9]	L	[2.0]	B	[4.5]	L	[3.0]	B	[5.1]	B	[2.7]	B
2	Arsenic		5.9	K	15.7	K	33.6	K	48.8	K	117	K	24.0	K	96.3	K	96.9	K	16.2	K	29.4	K
40	Barium		67.1	J	164	J	485	J	200	J	334	J	193	J	235	J	255	J	1810	J	196	J
1	Beryllium		[0.58]		[0.62]		[0.43]		[0.61]		[0.63]		[0.60]		[0.73]		[0.69]		[0.67]		[0.44]	
1	Cadmium		1.5		4.1		6.5		4.6		6.5		4.0		7.1		7.2		7.6		6.0	
1000	Calcium		1300		2770		12800		7190		6870		14800		14900		20600		22900		9910	
2	Chromium		36.1	J	68.6	J	288	J	160	J	172	J	71.9	J	336	J	461	J	158	J	187	J
10	Cobalt		[8.8]		[11.1]		19.3		52.7		86.3		14.8		86.7		92.7		[14.4]		21.1	
5	Copper		24.5	J	213	J	277	J	263	J	470	J	347	J	353	J	374	J	198	J	273	J
20	Iron		52800	J	40800	J	34000	J	59500	J	82300 +	J	51900	J	88800 +	J	80900 +	J	22300	J	58300	J
0.6	*Lead		1120	J	8370	J	206000 +	J	139000 +	J	7460	J	11100	J	4590	J	5630	J	7670	J	264000 +	J
1000	Magnesium		4050		3350		2920		3950		3420		3180		3930		4450		4060		2140	
3	Manganese		247	J	253	J	435	J	372	J	403	J	348	J	589	J	637	J	272	J	413	J
0.1	Mercury				[0.06]		0.15		0.14		0.23		0.17		0.27		0.34				0.19	
8	Nickel		18.6	J	38.3	J	42.6	J	33.7	J	40.3	J	51.8	J	36.3	J	38.1	J	30.1	J	36.3	J
1000	Potassium		2070		1330		[1130]		1800		1610		[1160]		1560		1460		[963]		[710]	
1	Selenium		[0.8]	J	2.6	J	5.0	J	7.2	J	9.2	J	5.4	J	13.2	J	16.3	J	4.6	J	3.3	J
2	Silver						[1.3]		[1.7]		[1.8]		[0.33]		[1.8]		[1.9]		[0.45]		[1.3]	
1000	Sodium		[780]	B	[1040]	B	[662]	B	[501]	B	[487]	B	[949]	B	[550]	B	[524]	B	1650	B	[608]	B
2	Thallium		5.2		3.8	K			4.3	K	8.5		4.7	K	8.0		6.6		[1.1]	K	[1.2]	K
10	Vanadium		56.0		35.9		39.6		39.6		47.7		43.3		53.0		52.1		60.3		32.1	
4	Zinc		153		1180		6120 +		1820		2280		2110		2310		2900		13000 +		5050 +	
1	Cyanide			UL		UL	[0.29]	L	[0.15]	L	[0.21]	L	[0.17]	L	[0.22]	L	[0.23]	L		UL	[0.17]	L

CRDL = Contract Required Detection Limit

*Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS

revised 02/98

ORIGINAL

DATA SUMMARY FORM: I N O R G A N I C S

ite Name: 12TH STREET LANDFILL

SOIL SAMPLES
(mg/Kg)

ase #: 27341 Sampling Date(s): 08/31/1999 - 09/01/1999
DG #: MCWY47

+ Due to dilution, sample quantitation limit is affected.
See dilution table for specifics.

	Sample No.										
	Dilution Factor	1.00 / 10.00									
	% Solids	70.0									
	Location	TS-SB-03									
CRDL	ANALYTE										
40	Aluminum	5030									
12	Antimony	[14.3]	L								
2	Arsenic	27.8	K								
40	Barium	116	J								
1	Beryllium										
1	Cadmium	14.7									
1000	Calcium	8980									
2	Chromium	95.4	J								
10	Cobalt	53.5									
5	Copper	1590	J								
20	Iron	456000 +	J								
0.6	*Lead	148	J								
1000	Magnesium	1400									
3	Manganese	2810	J								
0.1	Mercury	[0.07]									
8	Nickel	111	J								
1000	Potassium	[396]									
1	Selenium	3.8	J								
2	Silver	[0.67]									
1000	Sodium	[612]	B								
2	Thallium	38.7									
10	Vanadium	21.0									
4	Zinc	1510									
1	Cyanide		UL								

CRDL = Contract Required Detection Limit

*Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS

revised 02/98

ORIGINAL

ORIGINAL

12 th Street Landfill

Industrial Soil - U.S. EPA CLP

Volatile Organic Analysis Data Sheet

All units in mg/kg

CAS#	Compound	TS-DC-01	Q	TS-DC-02	Q	TS-DC-03	Q	TS-DC-04	Q
74873	Chloromethane	0.11	U	0.011	U	0.0023	J	0.58	U
74839	Bromomethane	0.11	U	0.011	U	0.001	U	0.58	U
75014	Vinyl chloride	0.11	U	0.011	U	0.001	U	0.58	U
75003	Chloroethane	0.11	U	0.011	U	0.001	U	0.58	U
75092	Methylene chloride	0.42		0.011	U	0.067		0.58	U
67641	Acetone	0.019	J	0.0086	J	0.032		0.58	U
75150	Carbon disulfide	1.2		0.022		0.001	U	0.58	U
75354	1,1-Dichloroethene	0.11	U	0.011	U	0.001	U	0.58	U
75343	1,1-Dichloroethane	0.11	U	0.011	U	0.001	U	0.58	U
540590	1,2-Dichloroethene (total)	0.11	U	0.011	U	0.001	U	0.58	U
67663	Chloroform	0.11	U	0.0015	J	0.001	U	0.58	U
107062	1,2-Dichloroethane	0.11	U	0.011	U	0.001	U	0.58	U
78933	2-Butanone (MEK)	0.11	U	0.0023	J	0.001	U	0.58	U
71556	1,1,1-Trichloroethane	0.11	U	0.011	U	0.001	U	0.58	U
56235	Carbon tetrachloride	0.11	U	0.011	U	0.001	U	0.58	U
75274	Bromodichloromethane	0.11	U	0.011	U	0.001	U	0.58	U
78875	1,2-Dichloropropane	0.11	U	0.011	U	0.001	U	0.58	U
542756	1,3-Dichloropropene	0.11	U	0.011	U	0.001	U	0.58	U
79016	Trichloroethene	0.11	U	0.011	U	0.001	U	0.58	U
124481	Dibromochloromethane	0.11	U	0.011	U	0.001	U	0.58	U
79005	1,1,2-Trichloroethane	0.11	U	0.011	U	0.001	U	0.58	U
71432	Benzene	0.069	J	0.011	U	0.001	U	0.58	U
75252	Bromoform	0.11	U	0.011	U	0.001	U	0.58	U
108101	4-Methyl-2-pentanone	0.11	U	0.011	U	0.001	U	0.58	U
591786	2-Hexanone	0.11	U	0.011	U	0.001	U	0.58	U
127184	Tetrachloroethene	0.11	U	0.0058	J	0.001	U	0.58	U
79345	1,1,2,2-Tetrachloroethane	0.11	U	0.011	U	0.001	U	0.58	U
108883	Toluene	730		21		0.065		1,200	
108907	Chlorobenzene	0.11	U	0.011	U	0.001	U	0.58	U
100414	Ethylbenzene	0.046	J	0.0034	J	0.001	U	0.58	U
100425	Styrene	0.11	U	0.011	U	0.001	U	0.58	U
1330207	Xylene (total)	0.067	J	0.017		0.0046	J	0.58	U

U - Not Detected

J - Approximate

ORIGINAL

12 th Street Landfill

Industrial Soil - U.S. EPA CLP

Semi-Volatile Organic Analysis Data Sheet

All units in mg/kg

CAS#	Compound	TS-DC-01	Q	TS-DC-02	Q	TS-DC-03	Q	TS-DC-04	Q
108952	Phenol	70	U	9.1	U	530	U	210	
111444	bis(2-Chloroethyl) ether	70	U	9.1	U	530	U	19	U
95578	2-Chlorophenol	70	U	9.1	U	530	U	19	U
541731	1,3-Dichlorobenzene	70	U	9.1	U	530	U	19	U
106467	1,4-Dichlorobenzene	70	U	9.1	U	530	U	19	U
95501	1,2-Dichlorobenzene	70	U	9.1	U	530	U	19	U
95487	2-Methylphenol	70	U	9.1	U	530	U	19	U
108601	2,2'-oxybis(1-Chloropropane)	70	U	9.1	U	530	U	19	U
106445	4-Methylphenol	70	U	9.1	U	530	U	19	U
621647	N-Nitroso-di-n-propylamine	70	U	9.1	U	530	U	19	U
67721	Hexachloroethane	70	U	9.1	U	530	U	19	U
98953	Nitrobenzene	70	U	9.1	U	530	U	19	U
78591	Isophorone	70	U	9.1	U	530	U	19	U
88755	2-Nitrophenol	70	U	9.1	U	530	U	19	U
105679	2,4-Dimethylphenol	70	U	9.1	U	530	U	19	U
111911	bis(2-Chloroethoxy) methane	70	U	9.1	U	530	U	19	U
120832	2,4-Dichlorophenol	70	U	9.1	U	530	U	19	U
120821	1,2,4-Trichlorobenzene	70	U	9.1	U	530	U	19	U
91203	Naphthalene	70	U	1.6	J	530	U	19	U
106478	4-Chloroaniline	70	U	9.1	U	530	U	19	U
87683	Hexachlorobutadiene	70	U	9.1	U	530	U	19	U
59507	4-Chloro-3-methylphenol	70	U	9.1	U	530	U	19	U
91576	2-Methylnaphthalene	710		58		530	U	19	U
77474	Hexachlorocyclopentadiene	70	U	9.1	U	530	U	19	U
88062	2,4,6-Trichlorophenol	70	U	9.1	U	530	U	19	U
95954	2,4,5-Trichlorophenol	180	U	23	U	1,300	U	49	U
91587	2-Chloronapthalene	70	U	9.1	U	530	U	19	U
88744	2-Nitroaniline	180	U	23	U	1,300	U	49	U
131113	Dimethylphthalate	70	U	9.1	U	530	U	19	U
208968	Acenaphthylene	70	U	9.1	U	530	U	19	U
606202	2,6-Dinitrotoluene	70	U	9.1	U	530	U	19	U
99092	3-Nitroaniline	180	U	23	U	1,300	U	49	U
83329	Acenaphthene	450		9.1	U	75	J	19	U

U - Not Detected

J - Approximate

ORIGINAL
ORIGINAL

12 th Street Landfill

Industrial Soil - U.S. EPA CLP (continued)

Semi-Volatile Organic Analysis Data Sheet

All units in mg/kg

CAS#	Compound	TS-DC-01	Q	TS-DC-02	Q	TS-DC-03	Q	TS-DC-04	Q
51285	2,4-Dinitrophenol	180	U	23	U	1,300	U	49	U
100027	4-Nitrophenol	180	U	23	U	1,300	U	49	U
132649	Dibenzofuran	470		9.1	U	530	U	19	U
121142	2,4-Dinitrotoluene	70	U	9.1	U	530	U	19	U
84662	Diethylphthalate	70	U	9.1	U	530	U	19	U
7005723	4-Chlorophenyl-phenylether	70	U	9.1	U	530	U	19	U
86737	Fluorene	90		9.1	J	530	U	19	U
100016	4-Nitroaniline	180	U	23	U	1,300	U	49	U
534521	4,6-Dinitro-2-methylphenol	180	U	23	U	1,300	U	49	U
86306	N-Nitrosodiphenylamine	70	U	9.1	U	530	U	19	U
101553	4-Bromophenyl-phenylether	70	U	9.1	U	530	U	19	U
118741	Hexachlorobenzene	70	U	9.1	U	530	U	19	U
87865	Pentachlorophenol	180	U	23	U	1,300	U	49	U
85018	Phenanthrene	70	U	9.1	U	530	U	19	U
120127	Anthracene	70	U	9.1	U	530	U	19	U
86748	Carbazole	70	U	9.1	U	530	U	19	U
84742	Di-n-butylphthalate	70	U	9.1	U	530	U	19	U
206440	Fluoranthene	70	U	9.1	U	530	U	19	U
129000	Pyrene	70	U	9.1	U	530	U	19	U
85687	Butylbenzylphthalate	70	U	9.1	U	530	U	19	U
91941	3,3'-Dichlorobenzidine	70	U	9.1	U	530	U	19	U
56553	Benzo(a)anthracene	70	U	9.1	U	530	U	19	U
218019	Chrysene	70	U	9.1	U	530	U	19	U
117817	bis(2-Ethylhexyl)phthalate	70	U	68		530	U	20	
117840	Di-n-octylphthalate	70	U	9.1	U	530	U	19	U
205992	Benzo(b)fluoranthene	70	U	9.1	U	530	U	19	U
207089	Benzo(k)fluoranthene	70	U	9.1	U	530	U	19	U
50328	Benzo(a)pyrene	70	U	9.1	U	530	U	19	U
193395	Indeno(1,2,3-cd)pyrene	70	U	9.1	U	530	U	19	U
53703	Dibenz(a,h)anthracene	70	U	9.1	U	530	U	19	U
191242	Benzo(g,h,i)perylene	70	U	9.1	U	530	U	19	U

U - Not Detected
J - Approximate

ORIGINAL

12th Street Landfill

Industrial Soil - U.S. EPA CLP

Pesticide/Polychlorinated Biphenyl Analysis Data Sheet

All units in mg/kg

CAS#	Compound	TS-DC-01	Q	TS-DC-02	Q	TS-DC-03	Q	TS-DC-04	Q
319846	alpha-HCH	0.18	U	0.0094	U	0.17	U	0.02	U
319857	beta-HCH	0.18	U	0.0094	U	0.17	U	0.02	U
319868	delta-HCH	0.18	U	0.0094	U	0.17	U	0.02	U
58899	gamma-HCH (Lindane)	0.18	U	0.0094	U	0.17	U	0.02	U
76448	Heptachlor	0.18	U	0.0094	U	0.17	U	0.02	U
309002	Aldrin	0.18	U	0.0094	U	0.17	U	0.02	U
1024573	Heptachlor epoxide	0.18	U	0.0094	U	0.17	U	0.015	J
959988	Endosulfan I	0.18	U	0.0094	U	0.17	U	0.02	U
60571	Dieldrin	0.35	U	0.018	U	0.33	U	0.039	U
72559	4,4'-DDE	0.35	U	0.013	J	0.33	U	0.039	U
72208	Endrin	0.35	U	0.02		0.33	U	0.039	U
33213659	Endosulfan II	0.35	U	0.018	U	0.33	U	0.039	U
72548	4,4'-DDD	0.35	U	0.018	U	0.33	U	0.039	U
1031078	Endosulfan sulfate	0.35	U	0.018	U	0.33	U	0.039	U
50293	4,4'-DDT	0.35	U	0.014	J	0.33	U	0.039	U
72435	Methoxychlor	1.8	U	0.094	U	1.7	U	0.2	U
53494705	Endrin ketone	0.18	U	0.0094	U	0.17	U	0.02	U
7421363	Endrin aldehyde	0.35	U	0.018	U	0.33	U	0.026	J
5103719	alpha-Chlordane	0.18	U	0.0094	U	0.17	U	0.02	U
5103742	gamma-Chlordane	0.18	U	0.0094	U	0.17	U	0.02	U
8001352	Toxaphene	18	U	0.94	U	17	U	2	U
12674112	Aroclor-1016	3.5	U	0.18	U	3.3	U	0.39	U
11104282	Aroclor-1221	7.1	U	0.37	U	6.7	U	0.78	U
11141165	Aroclor-1232	3.5	U	0.18	U	3.3	U	0.39	U
53469219	Aroclor-1242	3.5	U	0.18	U	3.3	U	0.39	U
12672296	Aroclor-1248	3.5	U	0.18	U	3.3	U	0.39	U
11097691	Aroclor-1254	3.5	U	0.18	U	3.3	U	0.39	U
11096825	Aroclor-1260	3.5	U	0.18	U	3.3	U	0.39	U

U - Not detected.
J - Approximate

ORIGINAL

12th Street Landfill

Industrial Soil - U.S. EPA CLP

Inorganic Analysis Data Sheet

All units in mg/kg

CAS#	Compound	TS-DC-01	Q	TS-DC-02	Q	TS-DC-03	Q	TS-DC-04	
7429905	Aluminum	1,150		17,300				6,450	
7440360	Antimony	0.36	U	1.7				1.2	
7440382	Arsenic	5.1		15.3				19.7	
7440393	Barium	17.3		218				194	
7440417	Beryllium	0.051		0.3				0.3	
7440439	Cadmium	2		3.8				21.2	
7440702	Calcium	564		8,890				4,000	
7440473	Chromium	7.9		146				38.9	
7440484	Cobalt	3.5		8.9				14.8	
7440508	Copper	16.5		192				171	
7439896	Iron	10,300		17,600				48,800	
7439921	Lead	207		106,000				3,970	
7439954	Magnesium	2,010		2,100				1,290	
7439965	Manganese	19.6		167				519	
7439976	Mercury	0		0.23				0.18	
7440020	Nickel	0.14		25				36.9	
7440097	Potassium	240		552				557	
7782492	Selenium	0.84		2.9				1.2	
7440224	Silver	0.47	U	1.1				0.51	U
7440235	Sodium	779		323				165	
7440280	Thallium	0.79	U	4.8				0.87	U
7440622	Vanadium	9		24.5				23.1	
7440666	Zinc	13,600		4,110				1,490	
74908	Cyanide	2.7	U	3.3	U	2.5	U	2.9	U

U - Not detected

Note: There was insufficient sample to analyze sample TS-DC-03 for metals.

Shaded areas exceed EPA Region III Risk Based Concentrations (RBCs)

ORIGINAL

12 th Street Landfill
Residential Sediment - U.S. EPA CLP
Volatile Organic Analysis Data Sheet
All units in mg/kg

CAS#	Compound	TS-AM-01	Q	TS-AM-02	Q	TS-AM-03	Q	TS-FD-03	Q
74873	Chloromethane	0.013	U	0.013	U	0.013	U	0.013	U
74839	Bromomethane	0.013	U	0.013	U	0.013	U	0.013	U
75014	Vinyl chloride	0.013	U	0.013	U	0.013	U	0.013	U
75003	Chloroethane	0.013	U	0.013	U	0.013	U	0.013	U
75092	Methylene chloride	0.013	U	0.013	U	0.013	U	0.013	U
67641	Acetone	0.013	U	0.0031	J	0.02		0.0022	J
75150	Carbon disulfide	0.013	U	0.013	U	0.0023	J	0.013	U
75354	1,1-Dichloroethene	0.013	U	0.013	U	0.013	U	0.013	U
75343	1,1-Dichloroethane	0.013	U	0.013	U	0.013	U	0.013	U
540590	1,2-Dichloroethene (total)	0.013	U	0.013	U	0.013	U	0.013	U
67663	Chloroform	0.013	U	0.013	U	0.013	U	0.013	U
107062	1,2-Dichloroethane	0.013	U	0.013	U	0.013	U	0.013	U
78933	2-Butanone (MEK)	0.013	U	0.0021	J	0.0053	J	0.0022	J
71556	1,1,1-Trichloroethane	0.013	U	0.013	U	0.013	U	0.013	U
56235	Carbon tetrachloride	0.013	U	0.013	U	0.013	U	0.013	U
75274	Bromodichloromethane	0.013	U	0.013	U	0.013	U	0.013	U
78875	1,2-Dichloropropane	0.013	U	0.013	U	0.013	U	0.013	U
542756	1,3-Dichloropropene	0.013	U	0.013	U	0.013	U	0.013	U
79016	Trichloroethene	0.013	U	0.013	U	0.013	U	0.013	U
124481	Dibromochloromethane	0.013	U	0.013	U	0.013	U	0.013	U
79005	1,1,2-Trichloroethane	0.013	U	0.013	U	0.013	U	0.013	U
71432	Benzene	0.013	U	0.013	U	0.013	U	0.013	U
75252	Bromoform	0.013	U	0.013	U	0.013	U	0.013	U
108101	4-Methyl-2-pentanone	0.013	U	0.013	U	0.013	U	0.013	U
591786	2-Hexanone	0.013	U	0.013	U	0.013	U	0.013	U
127184	Tetrachloroethene	0.013	U	0.013	U	0.0019	J	0.013	U
79345	1,1,2,2-Tetrachloroethane	0.013	U	0.013	U	0.013	U	0.013	U
108883	Toluene	0.013	U	0.013	U	0.013	U	0.013	U
108907	Chlorobenzene	0.013	U	0.013	U	0.013	U	0.013	U
100414	Ethylbenzene	0.013	U	0.013	U	0.013	U	0.013	U
100425	Styrene	0.013	U	0.013	U	0.013	U	0.013	U
1330207	Xylene (total)	0.013	U	0.013	U	0.002	J	0.013	U

U - Not Detected
J - Approximate

ORIGINAL

12 th Street Landfill

Resiedntial Sediment - U.S. EPA CLP

Semi-Volatile Organic Analysis Data Sheet

All units in mg/kg

CAS#	Compound	TS-AM-01	Q	TS-AM-02	Q	TS-AM-03	Q	TS-FD-03	Q
108952	Phenol	0.43	U	0.44	U	0.43	U	0.44	U
111444	bis(2-Chloroethyl) ether	0.43	U	0.44	U	0.43	U	0.44	U
95578	2-Chlorophenol	0.43	U	0.44	U	0.43	U	0.44	U
541731	1,3-Dichlorobenzene	0.43	U	0.44	U	0.43	U	0.44	U
106467	1,4-Dichlorobenzene	0.43	U	0.44	U	0.43	U	0.44	U
95501	1,2-Dichlorobenzene	0.43	U	0.44	U	0.43	U	0.44	U
95487	2-Methylphenol	0.43	U	0.44	U	0.43	U	0.44	U
108601	2,2'-oxybis(1-Chloropropane)	0.43	U	0.44	U	0.43	U	0.44	U
106445	4-Methylphenol	0.43	U	0.44	U	0.43	U	0.44	U
621647	N-Nitroso-di-n-propylamine	0.43	U	0.44	U	0.43	U	0.44	U
67721	Hexachloroethane	0.43	U	0.44	U	0.43	U	0.44	U
98953	Nitrobenzene	0.43	U	0.44	U	0.43	U	0.44	U
78591	Isophorone	0.43	U	0.44	U	0.43	U	0.41	J
88755	2-Nitrophenol	0.43	U	0.44	U	0.43	U	0.44	U
105679	2,4-Dimethylphenol	0.43	U	0.44	U	0.43	U	0.44	U
111911	bis(2-Chloroethoxy) methane	0.43	U	0.44	U	0.43	U	0.44	U
120832	2,4-Dichlorophenol	0.43	U	0.44	U	0.43	U	0.44	U
120821	1,2,4-Trichlorobenzene	0.43	U	0.44	U	0.43	U	0.44	U
91203	Naphthalene	0.43	U	0.44	U	0.43	U	0.44	U
106478	4-Chloroaniline	0.43	U	0.44	U	0.43	U	0.44	U
87683	Hexachlorobutadiene	0.43	U	0.44	U	0.43	U	0.44	U
59507	4-Chloro-3-methylphenol	0.43	U	0.44	U	0.43	U	0.44	U
91576	2-Methylnaphthalene	0.43	U	0.44	U	0.43	U	0.44	U
77474	Hexachlorocyclopentadiene	0.43	U	0.44	U	0.43	U	0.44	U
88062	2,4,6-Trichlorophenol	0.43	U	0.44	U	0.43	U	0.44	U
95954	2,4,5-Trichlorophenol	1.1	U	1.1	U	1.1	U	1.1	U
91587	2-Chloronapthalene	0.43	U	0.44	U	0.43	U	0.44	U
88744	2-Nitroaniline	1.1	U	1.1	U	1.1	U	1.1	U
131113	Dimethylphthalate	0.43	U	0.44	U	0.43	U	0.44	U
208968	Acenaphthylene	0.43	U	0.44	U	0.43	U	0.44	U
606202	2,6-Dinitrotoluene	0.43	U	0.44	U	0.43	U	0.44	U
99092	3-Nitroaniline	1.1	U	1.1	U	1.1	U	1.1	U
83329	Acenaphthene	0.43	U	0.44	U	0.43	U	0.44	U

U - Not Detected

J - Approximate

ORIGINAL

12 th Street Landfill

Residential Sediment - U.S. EPA CLP (continued)

Semi-Volatile Organic Analysis Data Sheet

All units in mg/kg

CAS#	Compound	TS-AM-01	Q	TS-AM-02	Q	TS-AM-03	Q	TS-FD-03	Q
51285	2,4-Dinitrophenol	1.1	U	1.1	U	1.1	U	1.1	U
100027	4-Nitrophenol	1.1	U	1.1	U	1.1	U	1.1	U
132649	Dibenzofuran	0.43	U	0.44	U	0.43	U	0.44	U
121142	2,4-Dinitrotoluene	0.43	U	0.44	U	0.43	U	0.44	U
84662	Diethylphthalate	0.43	U	0.44	U	0.43	U	0.44	U
7005723	4-Chlorophenyl-phenylether	0.43	U	0.44	U	0.43	U	0.44	U
86737	Fluorene	0.43	U	0.44	U	0.43	U	0.44	U
100016	4-Nitroaniline	1.1	U	1.1	U	1.1	U	1.1	U
534521	4,6-Dinitro-2-methylphenol	1.1	U	1.1	U	1.1	U	1.1	U
86306	N-Nitrosodiphenylamine	0.43	U	0.44	U	0.43	U	0.44	U
101553	4-Bromophenyl-phenylether	0.43	U	0.44	U	0.43	U	0.44	U
118741	Hexachlorobenzene	0.43	U	0.44	U	0.43	U	0.44	U
87865	Pentachlorophenol	1.1	U	1.1	U	1.1	U	1.1	U
85018	Phenanthrene	0.43	U	0.44	U	0.43	U	0.044	J
120127	Anthracene	0.43	U	0.44	U	0.43	U	0.44	U
86748	Carbazole	0.43	U	0.44	U	0.43	U	0.44	U
84742	Di-n-butylphthalate	0.43	U	0.44	U	0.43	U	0.44	U
206440	Fluoranthene	0.43	U	0.44	U	0.43	U	0.081	J
129000	Pyrene	0.43	U	0.44	U	0.43	U	0.062	J
85687	Butylbenzylphthalate	0.43	U	0.44	U	0.43	U	0.072	J
91941	3,3'-Dichlorobenzidine	0.43	U	0.44	U	0.43	U	0.44	U
56553	Benzo(a)anthracene	0.43	U	0.44	U	0.43	U	0.043	
218019	Chrysene	0.065	J	0.44	U	0.43	U	0.055	J
117817	bis(2-Ethylhexyl)phthalate	0.085	J	0.13	J	0.079	J	0.81	
117840	Di-n-octylphthalate	0.43	U	0.44	U	0.43	U	0.44	U
205992	Benzo(b)fluoranthene	0.43	U	0.44	U	0.43	U	0.045	J
207089	Benzo(k)fluoranthene	0.43	U	0.44	U	0.43	U	0.44	U
50328	Benzo(a)pyrene	0.43	U	0.44	U	0.43	U	0.44	U
193395	Indeno(1,2,3-cd)pyrene	0.43	U	0.44	U	0.43	U	0.44	U
53703	Dibenz(a,h)anthracene	0.43	U	0.44	U	0.43	U	0.44	U
191242	Benzo(g,h,i)perylene	0.43	U	0.44	U	0.43	U	0.44	U

U - Not Detected

J - Approximate

ORIGINAL

12th Street Landfill

Residential Sediment - U.S. EPA CLP

Pesticide/Polychlorinated Biphenyl Analysis Data Sheet

All units in mg/kg

CAS#	Compound	TS-AM-01	Q	TS-AM-02	Q	TS-AM-03	Q	TS-FD-03	Q
319846	alpha-HCH	0.0032	U	0.0023	U	0.0022	U	0.0023	U
319857	beta-HCH	0.0032	U	0.0023	U	0.0022	U	0.0023	U
319868	delta-HCH	0.0032	U	0.0023	U	0.0022	U	0.0023	U
58899	gamma-HCH (Lindane)	0.0032	U	0.0023	U	0.0022	U	0.0023	U
76448	Heptachlor	0.0022	U	0.0023	U	0.0022	U	0.0023	U
309002	Aldrin	0.0022	U	0.0023	U	0.0022	U	0.0023	U
1024573	Heptachlor epoxide	0.0022	U	0.0023	U	0.0022	U	0.0023	U
959988	Endosulfan I	0.0022	U	0.0023	U	0.0022	U	0.0023	U
60571	Dieldrin	0.0043	U	0.0044	U	0.0043	U	0.0044	U
72559	4,4'-DDE	0.0043	U	0.0044	U	0.0043	U	0.0044	U
72208	Endrin	0.0043	U	0.0044	U	0.0043	U	0.0044	U
33213659	Endosulfan II	0.0043	U	0.0044	U	0.0043	U	0.0044	U
72548	4,4'-DDD	0.0043	U	0.0044	U	0.0043	U	0.0044	U
1031078	Endosulfan sulfate	0.0043	U	0.0044	U	0.0043	U	0.0044	U
50293	4,4'-DDT	0.0043	U	0.0044	U	0.0043	U	0.0044	U
72435	Methoxychlor	0.022	U	0.023	U	0.022	U	0.023	U
53494705	Endrin ketone	0.0022	U	0.0023	U	0.0022	U	0.0023	U
7421363	Endrin aldehyde	0.0043	U	0.0044	U	0.0043	U	0.0044	U
5103719	alpha-Chlordane	0.0022	U	0.0023	U	0.0011	J	0.0023	U
5103742	gamma-Chlordane	0.0022	U	0.0023	U	0.0022	U	0.0023	U
8001352	Toxaphene	0.22	U	0.23	U	0.22	U	0.23	U
12674112	Aroclor-1016	0.043	U	0.044	U	0.043	U	0.044	U
11104282	Aroclor-1221	0.088	U	0.09	U	0.088	U	0.089	U
11141165	Aroclor-1232	0.043	U	0.044	U	0.043	U	0.044	U
53469219	Aroclor-1242	0.043	U	0.044	U	0.043	U	0.044	U
12672296	Aroclor-1248	0.043	U	0.044	U	0.043	U	0.044	U
11097691	Aroclor-1254	0.043	U	0.044	U	0.043	U	0.044	U
11096825	Aroclor-1260	0.043	U	0.044	U	0.043	U	0.044	U

U - Not detected.

J - Approximate

ORIGINAL

12th Street Landfill
Residential Sediment - U.S. EPA CLP
Inorganic Analysis Data Sheet
All units in mg/kg

CAS#	Compound	TS-AM-01	Q	TS-AM-02	Q	TS-AM-03	Q	TS-FD-03	Q
7429905	Aluminum	46,500		39,000		4,630		35,400	
7440360	Antimony	0.45	U	1		1.3		0.59	
7440382	Arsenic	8.9		26		13.1		26.4	
7440393	Barium	1,610		6,270		96.6		3,510	
7440417	Beryllium	0.53		0.79		0.78		0.82	
7440439	Cadmium	7.5		2.9		0.84	U	2.7	
7440702	Calcium	38,000		89,500		380,000		68,600	
7440473	Chromium	56.1		72.1		27.7		79.3	
7440484	Cobalt	7.7		14.6		9		14	
7440508	Copper	233		71.9		544		70.9	
7439896	Iron	13,000		17,500		13,200		18,800	
7439921	Lead	593		383		2,570		911	
7439954	Magnesium	5,620		4,240		790		3,890	
7439965	Manganese	143		431		89.7		349	
7439976	Mercury	0.058	U	0.051		0.058	U	0.065	
7440020	Nickel	35		22.2		11.4		23	
7440097	Potassium	957		2,140		182		2,130	
7782492	Selenium	0.74		0.65	U	3.9		0.64	U
7440224	Silver	0.58	U	0.59	U	0.58	U	0.58	U
7440235	Sodium	1,320		984		123		967	
7440280	Thallium	0.97	U	0.99	U	0.97	U	1.2	
7440622	Vanadium	65.6		67.3		9.7		64.2	
7440666	Zinc	13,400		10,500		776		8,850	
74908	Cyanide	3.3	U	3.4	U	3.3	U	3.3	U

Attachment 4

Photograph Log